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BROKEN SLEEP.

BY

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In these strenuous times there has been probably no greater interference with the ordinary comfort of humanity than the broken sleep that has become such a widespread experience since the outbreak of war. The disturbance manifests itself in various ways: some cannot get off, but, once asleep, rest comfortably till morning; others go to sleep immediately on getting into bed, but wake during the early hours to toss and tumble a longer or shorter time until they fall anew into a troubled and unrefreshing slumber; others, again, hardly sleep at all, if their statements can be relied upon, though in most instances they at least doze more than they know. To all who suffer thus, in whatever degree, sleep, such as it is, brings no morning sense of refreshment and reinvigoration, and many are able only too truly to say with Job, "When I lie down I say, When shall I arise and the night be gone? and I am full of tossings to and fro unto the dawning of the day."

The sleeplessness which so often accompanies organic disease is a direct consequence of the primary ailment, and its treatment becomes merged in that of the general condition. But apart from disease, the sound and untroubled sleep of healthy youth comes to yield to a less settled habit of dreamless nights as the years go on. The drag upon tissue-life becomes responsible for diminished elimination of waste products, impaired capacity for perfect assimilation, and inability to respond fully to the demand of unusual effort. Moral responsibilities also multiply, and a progressive perception of the greater verities of existence creates new concepts of duty, which add to the burden of each day's endeavour. In addition to these causes, which are the normal fulfilment of life's destiny, the rhythmic process of natural sleep is liable to be interrupted by diverse disturbances of a functional type. The subtle problem of etiology is obscure, and cannot be given any one explanation. Every functional interruption of physiological processes is associated with a corresponding instability of the nervous centres, and there is no feature more insistent down the whole gamut of the complex symptomatology of neurasthenia than broken sleep.

In those who have inherited a gouty diathesis and who are of the neurasthenic type there is, after middle life, a striking tendency to an early morning disturbance of sleep. Somewhere between 2 and 4 a.m. rest is broken by a sensation of gastric discomfort revealed by flatulent distension and eructations of sour acrid fluid. Sodium bicarbonate or soda-mint tablets, or even a dry biscuit, affords speedy relief, and sleep returns. The explanation probably is an excessive secretion of gastric juice, such as is constantly met with in cases of fatigue dyspepsia. The trouble most frequently arises after a day of over-strenuous work or mental strain, especially if to this is added an unwise evening meal. It is a functional condition, due to pyloric spasm, which, when associated with acidity two or three hours after each meal during the day, and with tenderness in the epigastric region, is often attributed to duodenal ulceration. Its long continuance may ultimately produce a breach of surface in the duodenal mucous membrane, but with proper attention to diet and the assistance of suitable remedies, organic change may be obviated. This early morning wakening is often the first symptom of excessive gastric secretion.

This terrible war has exacted from those who participate in its activities, as well as from those who "watch and wait," an enormous toll of misery both by day and by night. The man whose nervous system breaks under the strain of the horrors of active conflict finds his clinical counterpart in the mother, wife, or sweetheart at home, whose mental poise has equally, and after a similar manner, yielded to the burden of long-continued anxiety. Both have reached, through different channels, the limit of endurance, and the periodical repose which the nervous system can only obtain during sleep is interrupted, or, it may be, permanently broken.

The soldier suffering from shell shock cannot sleep because his cerebral centres have become obsessed and are kept active by the terrors of recent experiences. Similarly, the anxious wife or mother cannot sleep because her mental anxieties have created an atmosphere of apprehension which fills every moment of her life, and cannot be soothed into recuperative oblivion owing to the imperfect quality of the rest which comes to her at night. Sorrow and suffering have become a dominating feature in almost every household. Life is no longer a struggle to escape accident and disease, but has become a purgatory of suspense and bereavement. The unspeakable horrors on battlefields and in prisoners' camps; the moans and mute appeal of suffering from numberless hospitals scattered all over the war area; terrible disasters at sea, and ghastly air raids at home, make dismal news our daily portion. The Angel of Death is abroad, and in one way or another his activities are evident in almost every corner of the earth. Peace of mind and safety of body, being alike imperilled, sleep, which is the guardian of both, has become fickle and unsatisfying.

There are admittedly great differences in the hours of sleep essential to the maintenance of individual health, but even when due allowance is made for personal idiosyncrasy it still remains true that under war conditions the normal nights of many have become disturbed and restricted. The physical changes which result from war rations, and particularly from the diminution of fats in the daily dietary, must be submitted to until supplies become again more plentiful; but it is of prime importance that habits of sleep should be preserved if the best chance for complete restoration of nutrition is to be maintained against the day when conditions of life resume the peaceful tenor of their way.

In order to effect this desirable end an attempt ought to be made by every middle-aged person who suffers from insomnia in whatever degree to mend matters by some attention to the details of routine habits. It is scarcely necessary to say that the bedroom should be well ventilated, quiet, and properly darkened. The bed coverings should be light, though sufficiently warm, and the pillows ought to be so arranged as to provide for a comfortable angle of support for the head. When cold feet are a source of discomfort bed-socks should be worn and the bed warmed before retiring to rest. No serious work should be engaged in after dinner, but an interesting and unexciting novel, or a game of some sort, is often a useful preliminary to going to bed. Exercise in the open air to the extent of a two-mile walk daily is desirable, and, for those who are well enough and can arrange it, a weekly afternoon spent on the golf course, the bowling green, or the croquet lawn will be well repaid. The morning bath should be warm—from 95° to 100°—and a few minutes may be devoted, with advantage, to abdominal massage under the water. When the state of the general health is such as to offer no counter indication, a Turkish bath once a week is a wise procedure. The old-fashioned plan of a hot mustard and water foot-bath at bedtime is useful in many cases.

A tablespoonful of paraffin taken before breakfast will serve to lubricate the intestine and keep the bowels in order, and once or twice every week 1 grain of calomel, with ⅓ grain of extract of colchicum made into a pill with 3 grains of rhubarb or colocynth, will provide for hepatic efficiency. If the bowels require help otherwise, a suitable dose of a mild aperient water, of which several manufactured in this country can now be obtained, or other simple saline, should be taken in the morning immediately after the bath. It is important to prevent, as far as possible, gastro-intestinal fermentation, and to this end periodical courses for about a fortnight of such a combination as the following may be recommended: Charcoal, beta-naphthol, ox gall, guaiacum, of each 3 grains, put into a capsule, and taken forenoon and afternoon. The dietary must be arranged so as to include meat and tea once a day only, and to limit sugar and carbohydrates. The evening meal should be light; it may comprise a teacupful of clear *consommé*, fish, chicken, or eggs with green vegetables cooked as a *purée*, and an omlette, custard, or junket with cream when obtainable, or a simple savoury. The question of stimulant is debatable, but a glass of light claret, chablis, or moselle is agreeable to many, and promotes digestion. An ounce of brandy or whisky taken in hot milk, or Benger's food, or arrowroot after getting into bed is, as a rule, a useful nightcap.

When, in spite of attention to such details, the nights still remain unsatisfactory, the question of recourse to

hypnotics requires to be considered. Obviously, it is better they should be done without if possible, but their disadvantages are more than counterbalanced by the restoration of energy provided by some hours of sleep. The assistance of suitable drugs, wisely selected, and not pushed to the extent of establishing a "habit," is so helpful that preconceived notions should not be allowed to prohibit their administration. Whatever hypnotic be chosen, the best results are obtained by giving it for three or four nights in succession rather than by leaving it to the patient's judgement to take as he pleases. By anticipating the risk of a bad night, the evil habit of broken sleep may be frequently escaped. The bromides are the simplest and least objectionable of all sedative drugs. They ought to be administered in full doses of 30 grains, and their efficacy will be much enhanced by combination with small doses of chloral hydrate. The latter drug has been handicapped by an unfortunate reputation for a dangerous influence upon the cardiac centres. This danger, if it exists at all except when the drug is exhibited in large doses, is grossly exaggerated, and may be disregarded altogether when the heart is sound. Ten grains given in combination with 30 grains of the bromide of sodium or potassium will be found efficacious in a large number of cases. The combination ought to be given half an hour before bedtime, and it may be repeated safely after two hours if the initial dose fails to produce the required effect.

When this fails, a trial may be made of bromidia in drachm doses, of chloralamide in 30 grain doses, or of chloralose in 6 grain doses; all of which are variants of chloral in combination. There are other alternatives to choose from; one of the following may be selected and administered in the form of a cachet:

Medinal	...	...	... in 7 gr. doses;	or
Trional	...	...	... in 15 gr. ,,	or
Sulphonal	...	...	... in 20 gr. ,,	or
Adalin...	...	...	... in 10 gr. ,,	or
Chloretone	...	...	... in 15 gr. ,,	or
Bromural	...	...	... in 10 gr. ,,	

Paraldehyde is valuable and should not be lost sight of, but it is a nauseous drug, and leaves such an unpleasant and tell-tale odour in the breath that it is not desirable except in cases where there is mental excitement and extreme restlessness. In these circumstances arises also the question of morphine and atropine, and there can be no doubt that one-quarter of a grain of the former with one-hundredth of a grain of the latter, given hypodermically for a limited number of doses, often saves the situation where milder remedies fail in their effect. This combination is specially indicated in cases where pain, from whatever source, contributes to the sleepless nights. Just as in the case of chloral, so in that of morphine, the spectre of evil after-effects or the possible creation of a drug habit cause it to be withheld in many instances in which its beneficent effect far outweighs any theoretic fear of evil consequences. Its abuse is no argument against its legitimate use, and of all the remedies we possess against the hopeless misery of insomnia to which nothing else has brought relief, it is a stand-by whose reliability and potency may always be depended upon. Combination with atropine increases its efficacy, and minimizes some of its penalties. It often happens with hypnotics, as with so many other drugs, that a combination of two or more is productive of happier results than the administration of any one by itself. There is space only to mention a few such combinations that answer well:

(*a*) Fifteen grains of trional with half a grain of codeia.
(*b*) Twenty grains of chloralmide with thirty grains of potassium bromide.
(*c*) Ten grains of aspirin with seven grains of Dover's powder.
(*d*) Ten grains of bromural with one-sixth of a grain of morphine.
(*e*) Five grains of zinc valerianate with one eighth of a grain of heroin.

In cases in which there is a persistent high-tension pulse dependent upon sclerotic changes in the arteries, and the patient gets to sleep on first going to bed, but wakes within two hours, nitro-glycerine is of inestimable value. A tabloid containing 1 minim of the 1 per cent. solution of the drug put into the cheek the last thing at night and left to melt there gradually, often prevents increase of tension after getting to sleep, and may be safely repeated should the patient awake during the morning hours.

Electricity is said to be sometimes useful as a sedative agent, but its effects are uncertain and may prove to be exciting rather than soothing. Hypnotism also has its advocates, but, though possibly useful in carefully selected cases, it cannot be regarded as other than a doubtful and experimental remedy.

Finally, it is well to recognize the value of philosophy as a hypnotic. Submission to the inevitable and a cheerful acceptance of the duties and bothers of every day will go far to promote the likelihood of good sleep at night. The prayer of R. L. Stevenson is worth remembering:

> The day returns and brings us the petty round of irritating concerns and duties. Help us to play the man; help us to perform them with laughter and kind faces, let cheerfulness abound with industry. Give us to go blythely on our business all this day, bring us to our resting beds weary and content and undishonoured, and grant us in the end the gift of sleep. Amen.

THE "BUFFER-SALTS" OF THE BLOOD.

BY

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WHILE I quite agree with Dr. Benjamin Moore (June 29th, p. 720) that the expression "buffer-salts," as applied to the constituents of the blood plasma, is undesirable and misleading, I am unable to share his views as to the reason why it is so. In the first place, the name "buffer" does not suggest the correct interpretation of the way in which these substances do their work. Their action is rather to soak up, as it were, an excess of hydrogen—or hydroxyl—ions by the formation of compounds which are much less dissociated electrolytically than the acids or alkalis added. The word arises from a mistranslation of the original word, "*tampon*." I owe some apology to the readers of this JOURNAL for calling attention to some points which I have already discussed elsewhere, especially in my *General Physiology*, but I hope that some purpose may be served by bringing them together in this place.

Dr. Moore's account of the history of the name "buffer-salts" is not quite complete. Its origin is to be found in a paper by Fernbach and Hubert, published in the *Comptes rendus* of the French Academy in 1900 (vol. cxxxi, p. 293), where *tampon* is used to express the soaking up of hydrogen ions by such salts as sodium bicarbonate. The fact itself is most clearly seen with this salt, and the whole mechanism of its action, together with the similar action of the phosphates, has been explained in detail by Lawrence Henderson in a series of articles in the *American Journal of Physiology*, commencing in vol. xv in 1906. The complete discussion is given in vol. xxi, p. 427. To put the matter briefly, although somewhat incompletely: when an acid which is stronger than carbonic acid, such as lactic acid, which is dissociated with the production of a large percentage of hydrogen ions, passes into the blood, it combines with a part of the bicarbonate contained in the plasma, forming sodium lactate, and is therefore neutralized. At the same time, carbon dioxide is driven off and escapes by the lungs. But, even if it did not escape, there could be only an unimportant rise in the hydrogen ion concentration, because carbonic acid is an extremely weak acid and is scarcely dissociated at all.

To return to the word *tampon*. The original meaning of the name, which is probably that which the French writers had in mind, is that of a plug of cotton-wool pressed into a wound or elsewhere in order to stop bleeding. It has come later to be used for a railway buffer. It is, in either case, not quite the right word for the case we are dealing with. What we want is something to suggest the use of a mop or swab to absorb blood or exudation, not to stop haemorrhage by pressure. The name *tampon*, however, was used by Sörensen in a long series of researches (*Études enzymatiques*), published in French in the reports of the Carlsberg Laboratory at Copenhagen. It will be found on p. 19 of the eighth volume (1909). This work was also translated into German, and will be found in the *Biochem. Zeitsch.*, vol. xxi; on page 149 of this paper the word *tampon* is translated "Puffer," and hence got into English as "buffer," a quite inappropriate word. The buffer absorbs the energy of the moving train, not the train itself.

In its application to blood the use of the name is unnecessary, since the only "buffer-salt" of any importance is the sodium bicarbonate of the plasma; phosphate is present here only in insignificant amount. In its behaviour towards acids the plasma reacts precisely like solutions of sodium bicarbonate, and so little doubt is there as to the existence of this salt in it that until recently the carriage of the carbon dioxide from the tissues to the lungs was generally believed to be effected by it. It is truly present in less quantity by weight than the proteins, but quite sufficient to neutralize the fixed acids produced in the tissues. The molar concentration, indeed, of bicarbonate is higher than that of protein on account of the enormous molecular weight of the latter. In the opinion of Dr. Moore the function of combining with excess acid is to be ascribed to the proteins, not to the bicarbonate. He gives no data for the statement that there are not enough salts to account for one-tenth of the "protective influence." But I take it that he refers to his titrations with strong acid and alkali, to be discussed below. As to the carriage of carbon dioxide, he appears to be unaware of the work of Buckmaster, who has shown that this function belongs to haemoglobin.

The proteins of the plasma are said to be responsible for at least 90 per cent. of the "protective action" of the blood. I confess that I cannot understand the meaning of the statement that "all the inorganic salts of the plasma, including even the sodium chloride, are held in union by the proteins." How, then, can the fact be explained that the electrical conductivity of the plasma is practically that of a solution of free salts? It is also inconsistent with what is pointed out in the next paragraph, namely, that the depression of the freezing point is that of a one-sixth normal sodium chloride; in other words, about that of the salts, if free. If the salts were combined with the proteins, the depression of the freezing point would be much less than this. It is true that Pfeiffer and Modelski[1] have described the formation of what they regard as chemical compounds between certain amino acids and certain neutral salts; but it is remarkable that sodium chloride was not one of the salts, and I have been unable to confirm their results, although the instructions given were followed exactly. Much less is there evidence of combination between proteins and salts. On the contrary, the freezing-point measurements of Bugarsky and Liebermann[2] showed distinctly that this was not the case. Hardy[3] also was unable to find any evidence of chemical combination between salts and globulins.

The reason why Moore and his coadjutors found serum proteins to be able to neutralize acids and alkalis was because they used *strong* acid and alkali. Such are never sent into the blood stream as products of metabolism, and the representation of the "buffer" action of blood as related to these unphysiological reagents is incorrect. There is no evidence that proteins combine with the relatively weak organic acids produced in tissue metabolism. If an indicator such as neutral red, which reacts to small changes of hydrogen ion just around the point of neutrality, be added to serum, it will be found to change colour when a very small amount of lactic acid is put in, showing that the proteins have not taken it up. The change of colour can easily be shown to be due to the carbon dioxide liberated from the bicarbonate, since it can be brought back on exposure to air. The production of the carbamino acids of Siegfried is limited to the simpler amino acids; according to this observer himself, even leucine does not form one. However, I found, by conductivity measurements signs of combination of carbon dioxide with leucine. But there is no trace of the effect with proteins. We may also call to mind the results of Fletcher and Brown,[4] who showed that the only carbon dioxide given off by muscle on heating arises from the decomposition of sodium bicarbonate by the lactic acid formed. This applies up to the temperature at which destruction of the proteins occurs. Before the view put forward by Moore can be accepted, it is necessary that experimental evidence be brought showing that a pure protein solution can take up in combination sufficient carbon dioxide to account for that given off by plasma on the addition of a strong acid. Findlay[5] shows that no carbon dioxide is taken up by egg white, a very small amount by gelatin.

But there is no doubt that proteins are able to form true salts with strong acids and bases. They can combine with the former by aid of their basic (NH_2) groups and with the latter by aid of their acidic (carboxyl) groups. The reason why they do not combine with weak acids or neutral salts is clearly that the NH_2 and COOH groups are, in neutral solutions, united together by anhydride formation. In order that any combination may take place with other substances, this internal anhydride structure must be broken down by hydrolysis, a process that requires the aid of a strong acid or base.

It is somewhat remarkable that serum proteins are, chemically, very inactive substances. They do not serve for nutrition of the tissues, and their chief function seems to be to give a colloidal osmotic pressure to the blood, so that it shall not lose water to the tissues too rapidly. They have also an important part to play in the clotting process. I venture to think, however, that the term "reactivity of the serum" is not a particularly lucid one. It is usually associated with the capacity of readily entering into chemical reaction with other substances.

The fact that salts are formed by proteins with strong acids and bases is the cause of the rise of osmotic pressure observed in such cases by Roaf and Adamson. These salts are dissociated electrolytically, and, as I have shown elsewhere, all the ions are osmotically active. Various explanations might be given of the fact referred to by Moore, that the addition of a very small amount of acid lowers the osmotic pressure. It may be due to the decomposition of a small quantity of a sodium salt of protein present in the serum owing to escape of the normal carbon dioxide and the consequent development of alkalinity.

The use of the name "buffer-salts" in application to blood plasma is to be deprecated, as it seems to me, because it is apt to give an air of mystery to what is merely a simple property of bicarbonates. The expression "sodium bicarbonate" is all that is wanted in place of "buffer-salts" in this connexion.

No satisfactory name has been suggested for the general property as possessed by many weakly dissociated electrolytes. "Tampon" is better than "buffer" in any case.

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1 *Hoppe-Seyler's Zeitsch.*, vol. lxxxi, p. 329: and vol. lxxxv, p. 1. 2 *Pflüger's Archiv*, vol. lxxii, p. 51. 3 *Journ. of Physiol.*, vol. xxxiii, p. 251. 4 Ibid., vol. xlviii, p. 177. 5 *Kolloid. Zeitsch.*, vol. iii, p. 169.

THE PART PLAYED BY THE BONE GRAFT.

BY

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THE subject of bone grafting, which has acquired so great an importance to-day, has engaged the attention of surgeons for more than a century. Albee mentions Merren as having carried out experiments in 1809. The wonderful researches and operations of Ollier and Macewen appeared as long ago as 1867 and 1881. Singularly enough, the biology of bone and the bone graft still remains undetermined. The main views may be summarized as follows:

1. Bone is osteogenetic. The bone graft is osteogenetic and can live and grow without periosteum. (Macewen, Groves.)
2. Fragments of bone grow better than an entire piece. (Macewen.)
3. Periosteum acts as a limiting membrane and has no osteogenetic power. (Macewen.)
4. The periosteum is the principal agent of bone growth. The bone graft can live and grow by virtue of its own periosteum. (Ollier, Axhousen, and most of the American writers.)
5. The bone graft is osteo-conductive. (Murphy.)
6. Bier and others attach great importance to the cambium layer, endosteum, Haversian canal linings and marrow.

1, 2, 3. Macewen is the protagonist of the "bone from bone" theorists. His teaching is mainly founded upon his famous case (1882) in which part of the humerus of a boy was excised for osteomyelitis and restored by the implantation of small sections of bone obtained in the course of several osteotomies. The graft, therefore, was comminuted and homoplastic, and the logical inference is that the reconstruction of the diaphysis was brought about by the increase in size and coalescence of the fragments of bone. In the absence of a radiographic record all explanation as to the process of restitution must be more or less conjectural, or, at most, based upon experimental findings. The remarkable feature of the case is, that although the shaft is supposed to have been restored without the help of a "limiting membrane," yet there was limitation of size

and shape. Now, this is explained by "the law of natural adaptation," which seems to be the basis of all the theories on the survival and growth of bone grafts. It may be pertinently asked, however, if this law is potent enough to enable a parasitic piece of bone to acquire vitality, growth, and shape, how is it that, often enough, it fails to influence the two segments of a broken bone even when placed by open operation in ideal apposition and alignment? Macewen's technique is a direct challenge to the present practice of utilizing autogenous bone grafts covered with periosteum and firmly contacted with the recipient bone ends.

4. The teaching of the periosteum school is based upon the histological evidence that the cells of the periosteum of the bone graft show active proliferation. The loss of nuclear staining and the ultimate absorption of the bone cells is generally admitted, hence the convenient hypothesis that the vascularized strip of periosteum is the parent of the new bone. McWilliams is so strong in this belief as to doubt the possibility of successful bone grafting if the graft be denuded of its periosteum; while Groves is equally emphatic in his contention "that the process takes place by the proliferation of the cells of the bone itself." Macewen's work is sufficient refutation of McWilliams's claim, and my case J. A., with a complete *x*-ray record, is additional proof that bone can regenerate by means of grafts (I use the phrase advisedly) without periosteum. If the periosteum is the bone-forming medium, why advocate "whole thickness" grafting with rigid fixation? why adopt a procedure which can only be justified by the assumption that the graft can live in its entirety?

5. Murphy considered the problem on Barth's lines, and advanced the view that the graft is osteo-conductive—that is, that it acts as a scaffolding and gets gradually absorbed. He thus differs from the rest in admitting neither periosteal osteogenesis nor the survival of osteoblasts.

In the radiograms of my cases, taken at frequent intervals during the last four years, the disappearance of the graft can be traced in the clearest possible manner, and in no instance have I been able to verify "the increase in thickness which is considered to be the single sure sign of the continuance of the life of the graft" (Ollier, McWilliams). The increase in thickness is due to the deposit of new bone around the graft and not to any hyperplasia of the graft itself.

The great diversity of opinion amongst experimentalists leads us to the true conclusion, which is, that all the elements that enter into the constitution of bone are required for osteogenesis, and in agreeing that the best results are obtained from autogenous bone grafts with their periosteum and endosteum, all practical surgeons confirm this opinion.

It has generally been taken for granted, however, that the bone graft, once vascularized, behaves like normal bone, notwithstanding the fact that bone implanted anywhere but in a bone space always gets absorbed. No one has ever been able to produce progressive bone growth in a region where there has been no bone before.

In all these polemics there are two factors which do not appear to have received adequate consideration—namely, the periosteum and bone of the grafted limb. In no case could it be assumed that the shaft and periosteum have been destroyed or removed in their entirety by disease or excision. As a rule portions of the diaphysis and the whole periosteal sheath remain, and, even under the worst conditions, shreds of periosteum and spicules of bone are left in the gap.

What is, then, the part played by the bone graft from the time of its insertion to its disappearance?

In my opinion, all that the graft does is to supply what may be called the biochemical stimulus or irritant which has been abolished by trauma or disease, the new bone being formed from the diaphyseal ends, from periosteal and bony remains in the shaft zone, and in the young by epiphyseal lengthening. Dead bone acts in a similar way, but much less effectively. This is the explanation of Macewen's case and of my case J. A., with practically identical features. How else is it possible to account for the restoration of bone even after the graft has been actually excluded like a sequestrum and the graft bed in a state of profuse suppuration? The cambium layer and Haversian linings are cited by some as explaining these occurrences. No cambium or any other layer can float in pus and live.

The stimulating property of the bone graft has been noted by many, but only in the sense of a limited degree of cellular activity sufficient to cause fusion between the graft and the diaphyseal stumps. No one, however, seems to have considered this stimulus as the essential and all-important function of the graft.

Distinction must also be made between the use of a graft in an inert and in an active osteogenetic field. In cases of excision of the diaphysis in the young the new bone is often attributed to the graft, though regeneration usually takes place whether a graft is used or not. But even in children the graft is indicated, because it serves as an intraperiosteal splint, stimulates and accelerates bone growth, with the result that the shaft is reproduced perfectly and in less time.

Albee's book is full of illustrations intended to show the increase in size of the graft and the evolution of the medullary cavity, but in most of them the outline of the periosteum is discernible owing to the laminae of bone still adhering to it.

The success of the inlay method is due to the facts that it entails the exposure of the healthier sections of the bones and that each tissue is stimulated by its like. The more anatomical the "sitting" of the graft the better the result. When a graft is not absorbed and remains identifiable for six months or more, even though seemingly united by callus, the union will be found to be false and fragile and the graft undergoing cartilaginous change. (Case T. E.)

Bone graft surgery is not as widely practised as it deserves to be. In the mutilations of war, osteomyelitis, tuberculous disease, ununited fractures—in short, in all cases necessitating excision of bone, in spinal caries and in fractures of the spinal column the bone graft is an unrivalled means of repair and cure.

DESCRIPTION OF CASES.

Case 1.

J. A., aged 8, operated on for acute osteomyelitis, August, 1913, came under my care in August, 1914. There had not been the slightest attempt at bone growth for twelve months. The gap measured over six inches; the diaphyseal ends were nipple-shaped and sclerosed. An autogenous bone graft without periosteum was placed *in situ;* its upper end was placed in "shavings" raised with the chisel, and the lower end in the medullary canal (Fig. 1). There was no firm contact in Murphy's sense. The graft was cut with chisels. Fig. 2 (September 1st, 1916) shows great increase in length of the upper segment. The shaft was still incomplete, the gap measuring about 1½ in. with the rib in position. The parents objected to more bone being taken from the sound leg. Rarefaction of the lower segment was noticeable in the radiogram. The rib was completely absorbed. Fig. 3 shows inlay grafting without periosteum (circular twin saw) in February, 1917, and Fig. 4 the completed shaft.

Case 2.

A. F., aged 9, had tuberculous diaphysitis of the radius of many years' standing; there was mixed infection, with profuse suppuration and sinuses. Fig. 5 shows the extensive involvement of the shaft.

Excision of diaphysis was performed and graft without periosteum inserted, as shown in Fig. 6. Small drainage tubes are seen in the periosteal sheath and laminae of bone adhering to periosteum. Fig. 7 shows active osteogenesis and the shapelessness of the new bone. The graft is faintly visible. Fig. 8, from a radiogram taken after eight months, affords evidence of the perfect restoration of the shaft.

Case 3.

H. B., aged 17, was suffering from tuberculous disease of a phalanx (Fig. 9). A graft without periosteum was placed in the periosteal sheath (Fig. 10). Bone formation around the graft is seen in Fig. 11, and absorption of the graft and completion of the phalanx in Fig. 12.

Case 4.

T. E., aged 16, was seen with compound fracture of the tibia and virulent sepsis. Fig. 13 shows the loss of bone and the nipple-shaped and sclerosed diaphyseal ends. There was no sign of new bone for twelve months. Inlay grafting with periosteum (circular twin saw) was performed in December, 1915. By May, 1916, there was firm union. Fig. 14, from a radiogram taken on readmission to hospital for fracture in the region of graft in August, 1917, shows the graft still identifiable, and the callus above and below and the fracture. At the operation the graft was found to be quite soft and was cut out with the knife. The part was regrafted (inlay with periosteum) and there is now firm union.

I am indebted to Dr. Woodburn Morison, radiographer to the District Infirmary, for the radiograms.

Owing to the difficulty of reproducing radiograms under existing conditions, due to shortage of paper, drawings in Indian ink, made from the radiograms by Mrs. Williamson, of Ashton-under-Lyne, have been reproduced here.

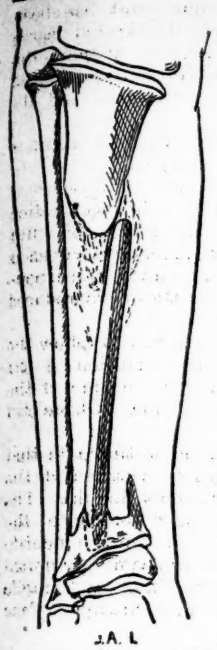
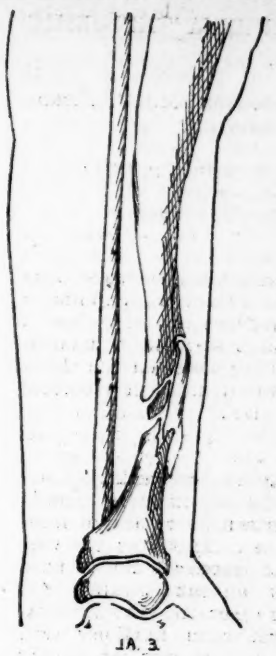


FIG. 1.

FIG. 2.



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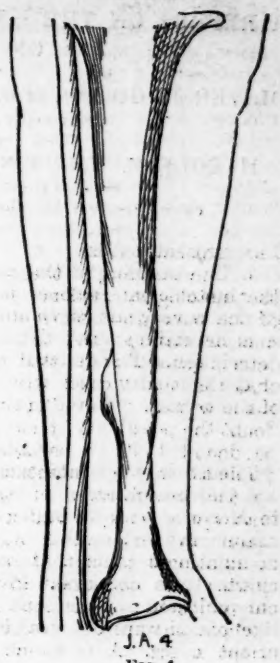

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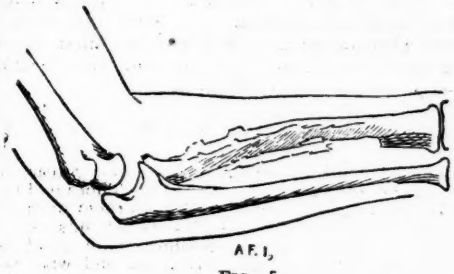

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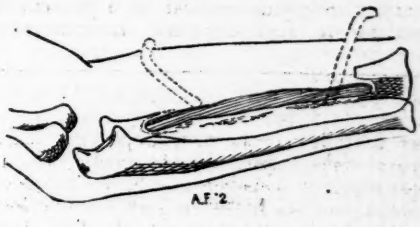
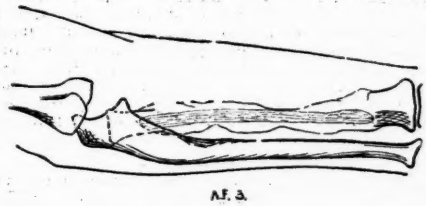


FIG. 6.



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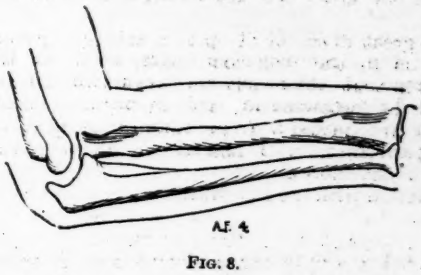

FIG. 8.

FIG. 9.

FIG. 10.

FIG. 11.

FIG. 12.

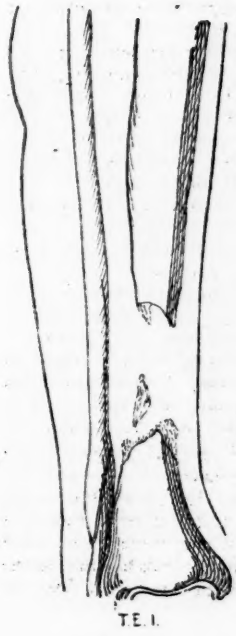

FIG. 13.

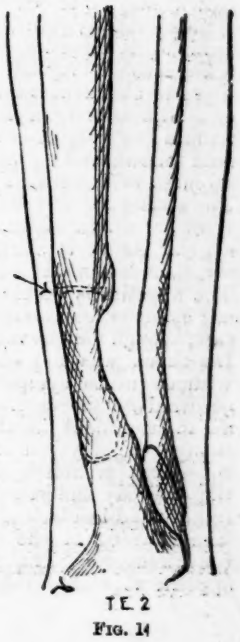

FIG. 14

A REPORT ON THE "INFLUENZA" EPIDEMIC OF 1918.

BY

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THE present outbreak of influenza in epidemic form is claiming considerable attention from a medical as well as from an economic and even military standpoint. Though clinically very similar to other epidemics in former years, it is nevertheless sufficiently distinct to merit a detailed description. The following notes are based on the study of the first fifty cases which occurred amongst members of the Royal Air Force in this hospital.

Etiology.

The average age incidence in these cases was 24.

A Gram-negative micrococcus, similar in most respects to *Micrococcus catarrhalis*, was grown (in all cases) from nasopharyngeal swabs and sputum. This was the predominating organism. In some instances an almost pure culture was obtained. Pfeiffer's influenza bacillus was only cultured in 8 per cent. of the cases, though influenza-like bacilli were observed by direct smears in 62 per cent. of the cases. A Gram-negative micrococcus resembling meningococcus was isolated in 10 per cent. of the cases, and Hoffmann's bacillus in 4 per cent. *Streptococcus brevis* and the pneumococcus were present in several cases, but not in large numbers. Experimental inoculation of the Gram-negative micrococcus on the mucous membrane of the nasopharynx in two healthy persons produced the disease in typical form. The micrococcus was recovered from the throat and sputum of these cases during the disease. It seems, therefore, that the micrococcus is probably the specific organism, either alone or in conjunction with the *B. influenzae*.

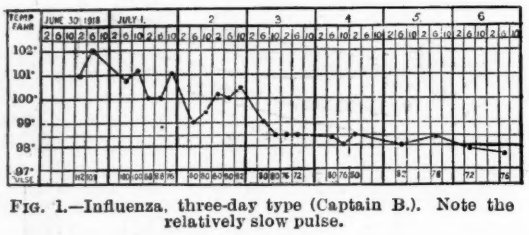

FIG. 1.—Influenza, three-day type (Captain B.). Note the relatively slow pulse.

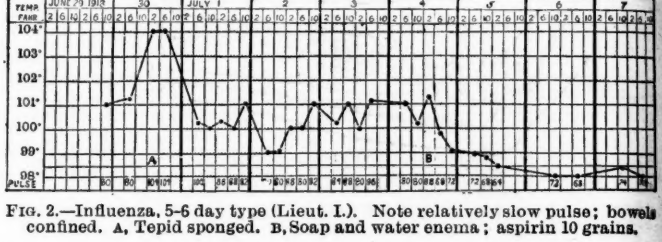

FIG. 2.—Influenza, 5-6 day type (Lieut. I.). Note relatively slow pulse; bowels confined. A, Tepid sponged. B, Soap and water enema; aspirin 10 grains.

Symptoms.

The incubation period is short, about one to two days.

In a typical case the onset is strikingly sudden. A patient may go to bed apparently well and wake up complaining of body pains, headache, malaise, etc.; or he may be at his work, when he suddenly feels violently giddy, and in a few seconds may fall to the ground in a state of collapse. The two commonest initial symptoms are a slight feeling of chilliness and malaise, quickly becoming worse for each minute the patient is up and about. A diffuse headache soon follows, and an uncomfortable feeling of tightness and soreness in the throat and nose with a slight dry cough. The second day of the disease finds the patient a good deal worse, with, in addition, painful photophobia. There is a great desire to sleep the whole day (in some cases the somnolence has been the only symptom from first to last). The appetite is quickly and completely lost; the bowels are confined, but marked gastro-intestinal symptoms are rare, though violent vomiting has been an initial symptom. Diarrhoea was not observed. Colicky abdominal pain without other symptoms and signs, except the fever, occurred in one case. The third day will, as a rule, see an improvement in the general feeling of discomfort, though the physical signs are usually more marked and the cough troublesome. Backache may be severe. By the fifth day the patient feels very much better; appetite returns and headache and photophobia are absent or slight. The morning of the fifth day marks the beginning of convalescence. The patient feels quite well and the appetite is keen. A good deal of weakness, however, is present, and if the patient is allowed up before the sixth day he may feel extremely giddy, faint, and sick. Convalescence is rather slow, and the majority of patients do not recover their strength for a week to ten days after getting up.

Physical Signs.

The second or third day will present the most characteristic physical signs, which are:

1. *A toxic appearance.*
2. *Heavily-coated tongue.*
3. *Injection of the conjunctivae*, and signs of acute inflammation of the whole mucous membrane of the mouth, including gums and tongue, and of the nasopharynx. A milky mycelial growth is spread all over the inside of the mouth, and is usually most abundant opposite the last molar teeth. The gums are generally tender and may bleed slightly, either spontaneously or on touch. The breath is heavy and foul.
4. *The temperature rises rapidly*, and usually is highest on the second or third day. High temperatures of 103° F. and over are common. The highest temperature recorded was 106° F. There are two distinct types of fever, a three-day and a five-day. Of our cases 66 per cent. belonged to the three-day type and 34 per cent. to the five-day type. In the latter type there is often somnolence from the onset, and lasting three to four days. Defervescence is in all cases by lysis. In some the temperature may remain between 102° F. and 104° F. for three or four days before yielding. The fifth day usually finds the temperature normal or subnormal (see Figs. 1 and 2).
5. *The pulse* is slow (76–110), even when the temperature is continuously high.
6. Death may occur on the fourth or fifth day in the pneumonic form.
7. *Slight bronchitis* was present in several cases, and we have seen four of the pneumonic form, two of which died, but these latter were not studied in this hospital.
8. *The urine* is decidedly scantier in amount than normal. It is high coloured, and contains albumin in 90 per cent. of the cases. The amount of albumin present varies from a faint trace to 0.5 part per 1,000 (Esbach). Hyaline and granular casts were present in 50 per cent. of all cases on the third and fourth days. In the five-day fever type of the disease casts were present in 85 per cent. of the cases, but only in 36 per cent. of the three-day fever type. Blood casts were observed in 4 per cent. of the cases. The view that this urinary condition is something more than mere febrile albuminuria is borne out by the fact that two cases presented typical renal oedema—that is, swelling of the subcutaneous tissues of eyelids, back, and ankles. The kidneys were not palpable in any case.

TABLE I.—*Presence of Albumin and Casts in the Urine of Patients Suffering from Influenza—1918 Epidemic.*

Day of Disease.	No. of Cases Examined.	Percentage with Albumin.	Percentage with Casts.	Day of Disease.	No. of Cases Examined.	Percentage with Albumin.	Percentage with Casts.
1	18	55	0	9	15	60	0
2	21	85	19	10	13	46	0
3	32	90	47	11	13	38	0
4	32	84	50	12	12	41	0
5	24	75	12½	13	11	9	0
6	24	50	12½	14	8	12½	0
7	22	68	9	15	8	0	0
8	20	65	10	16	8	0	0

but slight tenderness in both loins was commonly elicited. The casts usually disappeared by the fifth or sixth day, but in some cases not till the ninth; the albumin continued down to the eighth or ninth and even to the fifteenth day. The opinion that this albuminuria is part of the disease is established by its absence on the first day in 50 per cent. of the cases and its disappearance as convalescence progresses (see Fig. 3 and Table I).

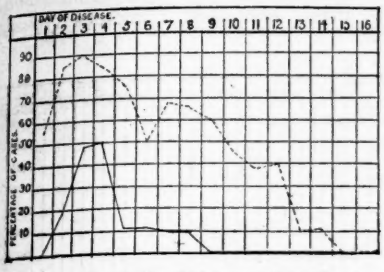

FIG. 3.—Graph showing percentage of cases of influenza with albumin and casts in the urine (1918 epidemic). Continuous line = casts; broken line = albumin. Note rise in percentage of cases with albumin on the seventh day, due probably to patients getting up on the sixth day.

9. *Enlargement of the spleen* was not found clinically in any of the cases. This is a point of difference with cases of influenza in former epidemics, especially that of 1889–1890, where the lower pole of the spleen usually became palpable.

Examination of the Blood.

Total white counts were done daily between 10 and 10.30 a.m. They showed a distinct leucopenia at the height of the fever (3,000 to 4,500 per c.mm. being a common figure), followed on the third or fourth day by a moderate leucocytosis (14,000 to 18,000 per c.mm.). (See Figs. 4 to 10 and Table II.)

TABLE II.—*Daily Total Leucocyte Counts in the Influenzal Epidemic of 1918.*

Day of Disease.	Lieut. G.	Lieut. I.	Lieut. W.	Capt. F.	Capt. R.	Cadet V.
1	4,062	7,500	3,750	—	5,000	4,062
2	8,750	5,000	5,625	6,875	6,250	7,500
3	6,875	9,062	5,937	5,312	18,750	16,250
4	7,500	6,875	3,125	9,375	14,062	13,125
5	20,000	11,875	7,500	14,375	16,562	8,750
6	4,062	5,000	5,000	4,687	7,500	5,937
7	4,375	13,750	4,375	10,620	16,250	3,125
8	12,500	11,250	9,375	8,125	7,500	5,937
9	13,750	12,187	16,250	12,500	—	10,000
10	15,625	13,750	8,750	13,125	—	—
11	7,500	7,500	11,250	15,000	—	—
12	11,250	10,000	—	—	—	—

Counts = No. of leucocytes per c.mm. of blood.

TABLE III.—*Daily Differential Counts in the Influenzal Epidemic of 1918.*

Day of Disease.	Capt. R.		Lieut. I.		Lieut. G.	
	P.	L.	P.	L.	P.	L.
1	83½	16½	84½	15½	87½	12½
2	81	19	86	14	88	12
3	63½	36½	69½	30½	68½	31½
4	75	25	70½	29½	68½	31½
5	78½	21½	84½	15½	79½	20½
6	66½	33½	73½	26½	60	40
7	—	—	—	—	46	54
8	—	—	—	—	66	34
9	—	—	—	—	55	45
10	—	—	—	—	53	47

P. = Polymorphs (that is, transitionals, neutrophil, eosinophil, and basophil polymorphonuclear leucocytes).
L. = Lymphocytes (that is, large and small lymphocytes and hyaline leucocytes).

Daily differential leucocyte counts showed a marked relative neutrophilia during the leucopenia, followed by a slight increase of the small lymphocytes when the leucocytosis set in. We have found in previous cases of influenza (Pfeiffer's bacillary type) that there was leucopenia followed by leucocytosis, but, unlike this epidemic, the leucopenia is accompanied by lymphocytosis, and the leucocytosis by neutrophilia. Such a picture as the present epidemic gives strongly suggests a micrococcal in contradistinction to a bacillary infection. The only other point of interest is a marked fall, almost absence, of eosinophil cells during the fever.

Influenza. Trench Fever.

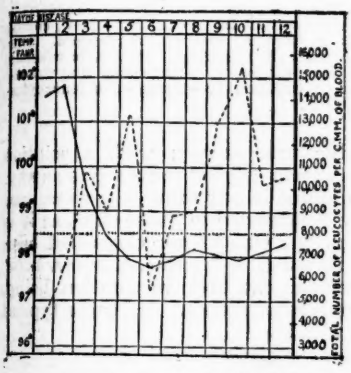

FIG. 4.—Total leucocyte count in influenza. Composite curve of six cases showing the average daily number of leucocytes per cubic millimetre of blood. Continuous line = temperature; broken line = number of leucocytes per c.mm. The curves were obtained by striking an average of the daily temperatures and leucocyte counts of six cases.

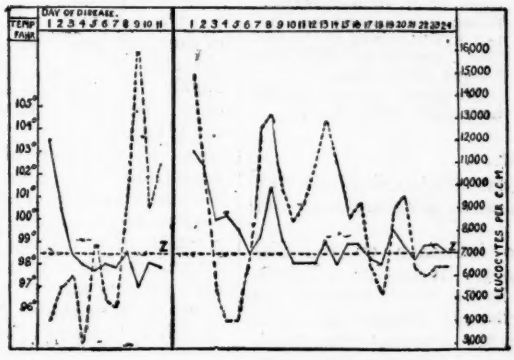

FIG. 5.—Graph showing the temperature and leucocyte curves in influenza and trench fever. Continuous line = temperature; broken line = daily total white blood cell count. The straight broken line (z) indicates the normal temperature and white cell count. Note the leucopenia in the febrile stage of influenza, whilst in trench fever the fever is accompanied by a leucocytosis.

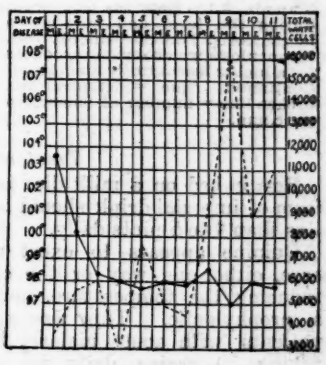

FIG. 6.—Influenza, three-day type (Lieut. W.). Note the leucopenia during the febrile period, followed by a leucocytosis on the eighth day. Continuous line = temperature; broken line = number of leucocytes per c.mm.

Of special interest is the chart reproduced in Fig. 10. The blood of this patient was examined daily for fifteen days before he developed influenza. A glance at his chart shows the distinct leucocytosis accompanying his pyorrhoea, but with the onset of influenza the rise in his temperature coincided with a marked leucopenia, followed on the fifth day by a leucocytosis. A distinct relative increase in the polymorph leucocytes appeared with this leucopenia, followed later by a relative and absolute lymphocytosis.

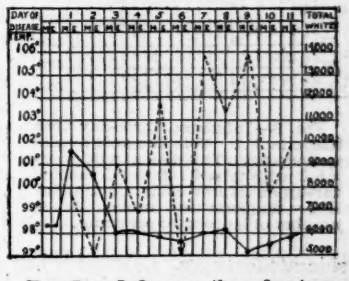

FIG. 7.—Influenza, three-day type (Lieut. I.). Note the leucocytosis following the fever. Continuous line = temperature; broken line = number of leucocytes per c.mm.

Blood Cultures.

So far no organisms have been isolated.

Comparison of Blood Picture with that of other Diseases.

The blood picture of the disease differs considerably from that of trench fever, pyorrhoea alveolaris, malaria, and bacillary influenza.

Trench Fever.—Here the leucocytosis is distinct, being highest when the temperature is highest and lowest when the temperature is on the fall. Moreover there are definite curves in the daily total white counts corresponding to the fever waves (Fig. 5).

Pyorrhoea Alveolaris.—This condition is mentioned because of the acute gingivitis which accompanied nearly all the cases of influenza observed by us. The blood picture in well-established pyorrhoea shows a marked swinging leucocytosis unaccompanied by pyrexia and resembling very closely chronic trench fever (see Fig. 10).

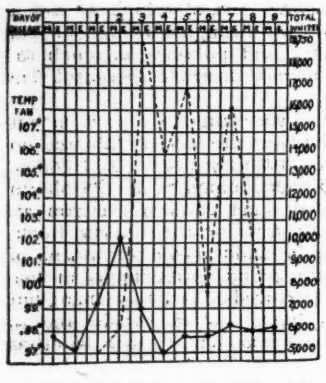

FIG. 8.—Influenza, three-day type (Captain R.). Note the leucopenia during the fever and post-febrile leucocytosis. This case suffered from furunculosis, which perhaps accounts for a higher leucocytosis than usual. Continuous line = temperature; broken line = number of leucocytes per c.mm.

Malaria.—In tertian malaria the blood counts show a leucocytosis and leucopenia on alternate days, even when there is no pyrexia. Leucopenia accompanies the height of the fever, and is marked by a relative neutrophilia, followed in a few hours by a mononuclear increase. This is of importance in recognizing the onset of influenza in an old malarial case, as in such cases the mononuclear increase does not appear until about the fifth day or so after the height of the fever.

Bacillary influenza has been dealt with above.

Treatment.

Rest in bed on a milk diet is essential. Fluids in the form of imperial drink should be taken in abundance; not less than 4 to 5 pints daily.

Quinine appears to exert no influence on the disease, either one way or the other. It has no effect in reducing the temperature, nor is its use warranted as a prophylactic. This was strikingly shown by three patients with acute malaria in the wards, who were taking 30 grains daily for several days before they finally succumbed to the influenza. The drug has been given a thorough trial but is now abandoned.

Aspirin appears to have a decided, and in cases a very striking, effect, almost specific; 10 grains should be given thrice a day. In severe cases, accompanied by high temperatures with vomiting and collapse, the effect of aspirin 15 grains, swallowed with ½ to 1 oz. of brandy in water, with 3 drachms liq. ammonii acetatis, is immediate.

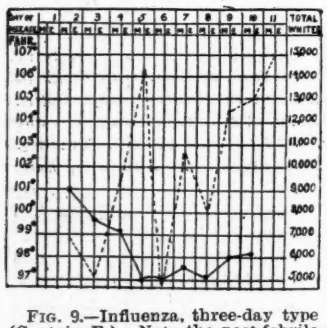

FIG. 9.—Influenza, three-day type (Captain F.). Note the post-febrile leucocytosis. This patient was inoculated with mixed influenzal vaccine three months previously. Continuous line = temperature; broken line = number of leucocytes per c.mm.

No local treatment to the mouth or throat is necessary, but boroglyceride is very useful in cleaning the tongue and gums. Soreness is relieved by inhalations of friar's balsam, and by sucking potassium chlorate lozenges. Calomel is best avoided. Enemata (soap and water) gave quick relief to the temperature and depression on the fourth day in three cases.

During convalescence the best diet is eggs, fish, and chicken, with an ample allowance of fresh vegetables and fruit. On the other hand, meats, strong soups, mustard, pepper, and beverages such as coffee and strongly-made tea, are not to be taken. In view of the evidence of slight nephritis, this seems a reasonable and necessary precaution. Freedom from strenuous active duty for a week after convalescence has become established, is also a wise measure. On that point mention may be made of a young lieutenant engaged in instructing cadets. He was sent back to duty after two days' semi-convalescence, and reported himself at the Mount Vernon Hospital two days later, complaining of weakness, headache and backache. His urine contained numerous typical hyaline casts. Patients cannot be considered cured while this abnormal urinary condition persists. As is mentioned above, the urine is not free from albumin until about the tenth day, or even as late as the twenty-first day.

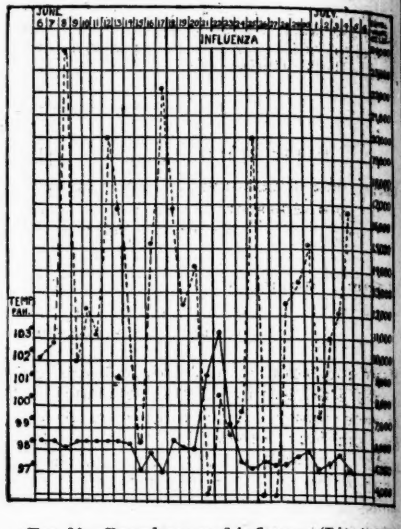

FIG. 10.—Pyorrhoea and influenza (Lieut. G.). Note the onset of influenza (June 21st), corresponding with a distinct leucopenia. The leucocytosis of pyorrhoea alveolaris without pyrexia is well shown. Continuous line = temperature; broken line = number of leucocytes per c.mm.

Prophylaxis.

In default of isolation, which is wholly impracticable, no satisfactory prophylaxis is available. Swabbing the throat with a solution of mercury perchloride (1 in 1,000) in an equal quantity of glycerin, or repeated spraying of the nasopharynx with a solution containing free chlorine, seem as good preventives as any. The administration of quinine in any form is useless, and cannot be too strongly condemned in these days, as it is a waste of a valuable drug. One of our cases had been twice inoculated with a mixed *B. influenzae*, *M. catarrhalis* and *pneumococcus* vaccine, the last inoculation being three months before his present illness. He had a typical attack of influenza (see Fig. 9).

Summary.

1. The specific cause of this epidemic of an influenza-like disease appears to be a Gram-negative micrococcus, perhaps in association with *B. influenzae*, the latter being only isolated in 8 per cent. of the cases.

2. Incubation period one to two days. Duration three to five days, the five-day fever type being more severe and the casts found in the urine more numerous.

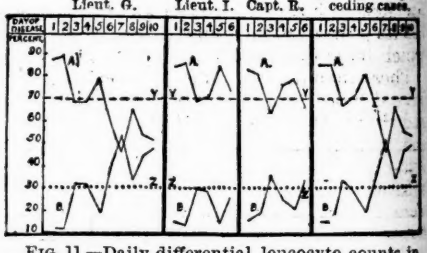

FIG. 11.—Daily differential leucocyte counts in the influenza epidemic of 1918. These curves show distinctly a polymorphonuclear increase in the first five days of disease, and a lymphocytic increase after the fifth day. This is the reverse to true bacillary influenza. A = Percentage of polymorphonuclear leucocytes; B = percentage of lymphocytes and hyalines; Y = normal percentage of polymorphs, that is, 70 per cent.; Z = normal percentage of lymphocytes, that is, 30 per cent.

3. The chief symptoms are: (*a*) Body pains, (*b*) malaise, (*c*) headache, (*d*) anorexia and constipation, (*e*) cough, (*f*) photophobia.

4. The chief physical signs are: (*a*) High temperature with maximum reading on the second day, (*b*) tongue heavily coated, (*c*) acute pharyngitis, stomatitis, gingivitis, and conjunctivitis, (*d*) albuminuria with hyaline and granular casts.

5. Blood counts show leucopenia with relative neutrophilia at the height of the fever.

6. *Treatment.*—Rest in bed. Free movement of bowels. Aspirin 10 grains thrice a day, until the temperature is

normal. Light diet and avoidance of bodily and mental exertion until the albumin has disappeared from the urine.

We here take the opportunity of thanking Lieut.-Colonel Muecke, R.A.F., for his kindness in granting us every facility for conducting this work. Most grateful thanks are also due to Dr. Carrie Sims and Miss Maud Samuel, B.Sc., for much valuable help.

[Since going to press a Gram-negative diplococcus (fairly large) has been isolated from the blood of two patients during the height of the fever. Attempts at subculturing failed in both cases.—H. E. Whittingham.]

THE DOCTORS' PROBLEM.

BEING THE PRESIDENTIAL ADDRESS TO THE SOUTH WALES AND MONMOUTHSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

BY

LIEUT.-COLONEL A. LLOYD JONES, M.R.C.S., D.P.H., R.A.M.C.(T.R.),

MUMBLES, GLAMORGANSHIRE.

MANY questions of vital interest are not unlikely to arise during the coming twelve months. The time was, not so very many years ago, when doctors met to discuss the scientific aspects of their work, but of late years men's thoughts have been absorbed in questions of a living wage, and cognate subjects; and there is a spirit of unrest abroad. The general practitioner feels some one has stolen a march on him, and, as if in a nightmare, feels his helplessness to make good his lost opportunity. Any large public body, with law at its back, can still pounce down upon him, and say, "Here, do this work for us, and take so much pittance for doing it." To any other man, or body of men, in this land of freedom such action would be intolerable, and would be unanimously and strenuously opposed, but the doctor tamely submits. What else, poor fellow, can he do? He has no organization that has legal power to take a stand and protect him.

The working man, for instance, is not asked by Government or by National Labour Commissioners to do everyday work for the country and accept what the authorities like to give him. No, it is exactly the other way round; it is he who dictates the terms, and, what's more, gets them! The working man has gone through the mill for ages; and, however much he may be belittled by the professional man, he at least has the intelligence to know that in union is strength, and that his strength is in his trade union.

The analogy may not be very complimentary to the profession, but it clearly suggests that we might learn wisdom from this industrial ant. It may sound "low down" to have to join a "trade union" in order to have and to hold our just rights. We may call it a "professional" union, but its powers must come through the Trades Union Acts, which have forestalled us.

There is one body over us that could come to our rescue, were it but expressive of the life and soul of our profession, and that is the General Medical Council. Our old crafts and guilds, and our modern universities and colleges, obtained charters and privileges which were merged into a General Medical Council, on which these bodies alone were represented till of late years. The general practitioner was practically ignored, and might have been nonexistent as far as his representation on this august body was concerned. The result has been that the General Medical Council has never been in touch or sympathy with the bulk of its registered members, which embrace the whole profession. Its deliberations are restricted to its statutory powers—namely, overhauling education, collecting registration fees, and exercising discipline over common-law offenders, all of which powers could be easily performed by a couple of the existing committees of the British Medical Association. This General Medical Council is so firmly established in and satisfied with its legal powers that it has never shown any disposition to enter into the daily life and concerns of the medical profession at large by giving them adequate representation for its taxation; and as far as its further efforts to aid and guide the general medical practitioner are apparent it might be a majestic sphinx, and nothing more.

We feel the birthright and destinies of our struggling profession are in its hands; the public and Parliament know it only too well, and laugh at us; and we, as an awakening body politic, are just beginning to realize our ignoble and painful position. So with such a terrible dead-weight against us we are driven to seek some other constitutional means of consolidating our forces for a more advantageous stand in vindication of our very existence.

The one body that nearly the whole profession, at home and abroad, looks up to for help and guidance in its hourly trouble is the British Medical Association. There is no other powerful organization in being and working so representative of its members and so democratic; and there is none so alive with the aspirations and activities of our daily life as is that stalwart tree, of which we are a branch here to-day. It has grown through much labour and patience and many vicissitudes, and pulsates as much to-day as of yore with the sincerest desire to represent the highest ambitions of our lot.

It cannot be expected to do everything for us; it is but a voluntary agency, and volunteers are out of date and no good in a fight. It has no statutory powers, and consequently has no compulsion over its members. To obtain these all-important powers it must petition Parliament, and it must proceed through Acts on the Statute Book. With such a legislative lever it could move mountains of inertia. This step may again sound *infra dig.* to professional units who have been nurtured on individualism; but Parliament itself submits to this law of majorities and to the ruling of democracy, which has come to stay, whether we like it or not.

With this much accomplished, our Association, reinforced with law and authority, can organize its ranks for any emergency; and it can then, with the deliberate and mature judgement of its members, dispute any encroachment on our just rights. To obtain this we must contribute to its funds liberally, as the lawyer does to his incorporated society and the working man to his union; we must not expect work for nothing, or the 9d. for 4d. business.

There is, as you all know, a new scheme in the wind which threatens to obscure most of those that in the past have exploited our brains and sinews—I mean the Ministry of Health. Whether this Ministry be an expansion of the so-called National Health Insurance Commission, or of the Local Government Board, or a combination of both, I know not, but in either case we have to be prepared for some revolutionary change, for better or for worse as regards ourselves. If we are united in professional solidarity, we can view the matter with equanimity and see that justice is done; if not—well, the devil help the hindmost!

We have had a brush with the Commissioners, which has left a stain of the conflict that has not yet been wiped out; still we must not grumble now at not having had our armour on at that time. The Local Government Board we have known as not an over-lenient taskmaster, with its ever-increasing duties and its never-increased pay, and its never-to-be-forgotten acquiescence in the universal reduction of the doctors' notification fee whilst every other worker had his fees raised. The Poor Law authorities have alone been conspicuous for their compassion to their officers, as well as to their poor; but alas! their days are doomed; and a glorified pauper attendance is being hatched to supplant it, called "state service."

Whatever the functions of this Ministry may be, and whichever of these bodies may predominate in its administration, the experience of the past decade has taught us to be wary, and not to be caught napping. If, however, we do not as a medical body benefit by experience, and protect ourselves, as others do, as one voice, a similar fiasco must be expected again; and our professional status must sink in the eyes of our sister professions into hopeless mire.

The admission of women into the medical profession will ultimately prove our emancipation from such as cheap contract practice, with its counter prescribing and dispensing, certificate scribbling, and the rest of that mechanical clerical drudgery into which we are gradually being dragged down with each state innovation. For contract practice can only be properly and honestly undertaken after liberal actuarial calculations of remuneration, holidays, emergencies, and like considerations have been duly taken into account. Woman's constitution will scarcely permit of her continuously performing the physical labour of man, and she will necessarily specialize

in domains more congenial to her nature. Her sphere will always be more in the realms of pure medicine than ours, and her presence and co-operation must exercise a refining and uplifting tendency. The fear of competition from her is groundless so long as the professional practice on both sides is honourable, and we can always trust the womenfolk to look after our finance better than ourselves. The jealousies that have existed to our cost between men will pale into insignificance in the presence of women, and our mutual confidences will grow. With such a partner in the field we can confidently look forward, for her clear insight and natural intuition will quickly sift and settle our difficulties and weld our scattered ranks into a homogeneous and victorious army. In fact, woman seems destined to bring about that happy union, call it trade or professional, of which we sorely stand in need, and I wish she were here already within the inner fold.

This ideal state will then give us the leisure to think out the numerous problems that bind us to the community and to the individual, and enable us to give of our best to the claims of learning and of labour.

Before concluding, let me emphasize the particular work of reconstruction we are called upon to discharge in view of the termination of this interminable war. Our brave colleagues who are out look forward to a better condition of things on their return, and it is ours to put the house in order for them. They have learnt the stern lessons of "union is strength," and "divided we fall"; and what better lesson can we carry into practice on their behalf?

If there be a better and sounder method of banding ourselves together than the one herein advocated, and seriously entertained by the Association some years ago, let it be forthcoming, and be well threshed out; and we shall gladly clutch at any straw that will direct us and our fellow voyagers into a harbour of safety. So long as mental and social unrest continues with regard to our professional status and prospects, so long will men be unable to give their undivided attention to the best work, and so long will the nation suffer, and be the poorer; hence this economic question cannot stand where it is.

The returning soldier will bring with him military regulations, which allow one surgeon to a battalion; and we in civil life must see to it that on his return there be one doctor to the thousand, with corresponding pay and allowances; and if the market requires more of us, it must requite us accordingly. Unless some such course is adopted in the immediate future men must specialize, or enter the services, or adopt some other vocation in life, or the general medical practitioner as we have hitherto known him will become as extinct as the dodo.

Let me please, Gentlemen, before sitting down, apologize as a Welshman for daring to pronounce an opinion on medical politics, whilst Wales has neither university nor college hall nor licensing body to raise a voice with medical authority. We Welshmen are deeply conscious of our inferiority in number and influence in this land of our birth; but we yield to none in our will and wish to uphold the best traditions of our noble calling. And it is to a mode of maintenance, or rather restoration, of this lofty standard that I have ventured to-day to ask your indulgent interest in a possible solution of this knotty and pressing problem.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

VANGHETTI'S OPERATION.

THE article in the BRITISH MEDICAL JOURNAL of July 20th on this method of utilization of the muscles of a stump to actuate artificial limbs prompts me to record my experience of the operation in two cases. The first of these was a patient with an amputation of the right arm at the junction of the middle and lower third of the humerus, who reached this country with his stump practically healed. When soundly healed the noticeable features of the stump were the mobility of the soft parts over the end of the bone, the absence of wasting of the biceps muscle, and the patient's power of still contracting it. These conditions rendered the stump, in my opinion, an ideal one for an attempt at "cinematization" by the tunnel method. The operation was performed according to the method described in detail by Professor Pellegrini in his paper read before the Inter-Allied Conference on the after-care of disabled men in London, in May, 1918. In this operation the tunnel is formed by a bridge flap and not from a single pedicle flap; the tunnel so formed is slipped between the superficial and deep halves of the muscle mass. The operation itself presented no difficulties and has the advantage over Sauerbruch's method of lessening, if not eliminating, the risk of death of a part of the skin tunnel.

The operation was followed by a flare-up in the form of mild skin infection. Fortunately it reacted promptly to treatment, and did not interfere with primary union of the wounds. At each end of the tunnel there was, however, a little necrosis of skin, probably due to the sutures being tied too tight. These are now epitheliating, and the patient is wearing without any discomfort a length of No. 12 bougie in the tunnel until the time comes to fit the rod and connexions of the artificial limb. Happily he needs no encouragement to keep up the tone of the muscle by constantly contracting it.

The second case was that of a patient who more than twelve months ago received a gunshot wound of the left elbow with loss of the articular ends of humerus and ulna, together with a portion of the ulnar nerve. Operative attempts at the restoration of a stable joint having failed, at the request of the patient amputation was decided upon as better than either a flail or fixed joint. In this case the "clava," or peg type of motor, was formed by bringing out from the middle of an anterior flap a mass composed of the tendon of the biceps, the lower end of the brachialis anticus, and the brachial artery, which was thus divided and tied at a point below the line of the amputation itself. This mass was surrounded with skin reflected for the purpose as part of the anterior flap.

It is, of course, too soon to say one word about the eventual usefulness of the motors in these two cases, but it appeared to me of value to describe them at this time to draw attention to two types of cases seen here at home in which the operation is indicated. There are, firstly, those cases of amputation in which the healing process has been so satisfactory that without the risk of any damage to a good stump an attempt of this kind to add to its usefulness appears a justifiable procedure; and, secondly, there are cases of late amputation to rid the patient of a limb rendered useless by complete loss of function from one cause or another, in which "cinematization" can be added to the deliberate amputation at one operation. Whilst it may be possible, as the writer of last week's article suggests, for the operation of "cinematization" to be performed at casualty clearing stations or elsewhere in France, the most numerous opportunities will surely arise at the base hospitals in this country. Those who are in doubt as to the real usefulness of these plastic motors—those who heard Professor Putti's lecture and saw his films will not be of their number—should bear in mind that if the operation fails, or the patient loses interest, or if for any other reasons no actual use is made of them, their formation in no way interferes with the fitting to the stump of an ordinary artificial limb, and the patient, therefore, is in no sense worse off. It cannot be wrong to submit any procedure which holds out a reasonable prospect of improving the function of amputation stumps to an interested and painstaking trial.

London, W. ERIC PEARCE GOULD, M.Ch., F.R.C.S.

TREATMENT OF ACUTE SEPTIC GINGIVITIS.

IT is important to call attention to the quite unnecessary vigour with which acute septic gingivitis is not infrequently treated by wholesale extractions of the teeth. A very intractable and depressing affection if improperly dealt with, it is in reality very amenable to appropriate treatment, and that fairly quickly, the pain by which it is accompanied being speedily relieved.

The routine treatment I have found efficacious is, after thoroughly rinsing the mouth with an iodine wash, to apply tiny pellets of wool soaked in camphor and carbolic acid (equal parts) well up into each interdental gingival space for a few minutes; this quickly eases the pain produced by any instrumentation. A fresh paste made by mixing equal parts of thymol, dried alum, and oxide of zinc with the oily camphor-carbolic mixture is then carefully packed into the gingival spaces and round the necks

of the teeth beneath the edges of the gum and allowed to remain there. A mouth-wash of "sanitas" is directed to be used after food, and the toothbrush is forbidden during the treatment. I apply the local paste every other day for ten days or so. After the second or third application there is decided amelioration of the troublesome conditions—sleeplessness, pain, bleeding, and malodour—and the patient expresses himself as feeling altogether better. The disease having been thoroughly scotched and the gums returning to a healthy condition, a simple astringent wash of alum and carbolic acid is all that is necessary to complete the cure. As a preventive to its recurrence I direct the patient to paint the gums every other day with the simple tincture of iodine, and to be particularly careful in maintaining a sanitary condition of his tooth-brush.

London, W. PERCY EDGELOW.

THE REDUCTION OF TEMPERATURE BY LOCAL ICE-BAGS.

THE following device for the reduction of hyperpyrexia seems so simple as hardly to merit description, but inasmuch as there are many practitioners to whom the idea has not occurred, and the advantages are so great, I desire to put it on record.

The method is to attack the blood stream in the great vessels at the points where they are subcutaneous, or nearly so. For this purpose a number of bags are filled with crushed ice. I first used sausage skins, but have now specially prepared rubber bags. Such bags can be readily improvised from discarded rubber gloves and the like. The sites attacked are the neck, the axilla, Scarpa's triangle, and the popliteal spaces. By this simple method it is claimed:

1. That a reduction of 3° in a quarter of an hour is obtained.
2. Cold sponging and other cumbersome methods are obviated—an enormous boon to patient and nurse.
3. The reduction is so rapid that the physician can see it accomplished before leaving the house, and in consequence can depart with a less anxious mind.
4. This method should prove especially useful to army surgeons working under the conditions which led me to devise it—namely, for heat-stroke in the Persian Gulf.

M. G. DOBBYN,
Captain R.A.M.C.

Reports of Societies.

OXFORD OPHTHALMOLOGICAL CONGRESS.

THE Oxford Ophthalmological Congress held its ninth annual meeting at Oxford on July 11th and 12th. As in former years, members enjoyed the hospitality of Keble College, and the meetings were held in the Department of Human Anatomy, kindly lent for the purpose by Professor Arthur Thomson.

The proceedings were opened by the Master, Mr. SYDNEY STEPHENSON, who gave an address on "The history of the Congress."

Discussion on Ophthalmology and the War.

Sir WILLIAM J. COLLINS, K.C.V.O., M.P., who had been invited to become the Doyne Memorial Lecturer for the year, opened the discussion on ophthalmology and the war, the subject selected by the Council. In his preliminary remarks he paid a sympathetic tribute to the late Robert W. Doyne, founder of the Congress. The address on the subject commanded the closest attention of the meeting, and those who took part in the discussion which followed were Lieut.-Colonel R. H. ELLIOT (London), Captain E. H. E. STACK, R.A.M.C.(T.), Miss MARION GILCHRIST (Glasgow), Dr. T. HARRISON BUTLER (Leamington), Captain P. H. ADAMS, R.A.M.C.(T.), Captain PERCIVAL J. HAY, R.A.M.C.(T.), Captain THOMSON HENDERSON, R.A.M.C., Mr. R. J. COULTER (Newport, Mon.), Major A. C. PURCHAS, N.Z.M.C., Staff Surgeon HANSON, C.B.E., R.N.V.R., Captain WHITTINGTON, R.A.M.C., Mr. J. GRAY CLEGG (Manchester), Dr. GEORGE YOUNG (Colchester), and Mr. BERNARD CRIDLAND (Wolverhampton). At the conclusion of the discussion Sir William Collins was presented with the Doyne Memorial Medal.

Papers.

A contribution by Lieut.-Colonel R. H. ELLIOT on "Some useful devices in operative and other work" concluded the proceedings of the first day.

On July 12th Sir WILLIAM BARRETT, F.R.S., read a paper, accompanied by demonstrations and slides, on "Entoptic vision." His work on this subject, which since the introduction of the ophthalmoscope has been far too much neglected by ophthalmologists, is well known, and his presentation of it to the Congress is likely to be of great assistance to the practice of ophthalmology in the near future.

Colonel HANFORD MCKEE, C.M.G., C.A.M.C., read a paper dealing with "Some aspects of military ophthalmology," containing conclusions from experience gained during the war, which should be of value to the highest administrative authorities.

Captain PERCIVAL J. HAY, R.A.M.C., read papers on "Implantation of cartilage after excision or evisceration of the eye," and on "Vulcanite casts as a support for prostheses," both of which were illustrated by slides, photographs of operative results, and radiograms.[1]

In the afternoon cases were shown at the Eye Hospital by Captain P. H. ADAMS, R.A.M.C.(T.), and Dr. ORR, after which a paper by Lieut.-Colonel ELLIOT on "Herpes zoster ophthalmicus" was read, followed by another on "The results of cataract operations," by Dr. T. HARRISON BUTLER, both of which were discussed.

Demonstrations.

In the Scientific Museum Sir WILLIAM BARRETT gave demonstrations with the entoptoscope and an optometer, Mr. SYDNEY STEPHENSON and Lieut.-Colonel ELLIOT showed interesting microscopic sections, Captain THOMSON HENDERSON showed sections of monkeys' eyes, with special reference to Descemet's membrane, and Captain ADAMS showed sections of horses' eyes, with reference to a hitherto unknown disease causing blindness. Captain T. HENDERSON showed photographs of gunshot injuries of the eyes and orbital regions, and also of contracted sockets improved by a suture operation which he described. Captain STACK showed a combined perimeter and scotometer, and Mr. R. J. COULTER improved test types.

In the Commercial Museum various novelties were on view.

Reviews.

SYMPTOMS AND THEIR INTERPRETATION.

Sir JAMES MACKENZIE'S thoughtful treatise on the interpretation of symptoms has been in the hands of the profession for nine years, and the appreciation it has met with is indicated by the fact that a second, and now a third, edition have been called for. It has been translated into other languages, and has doubtless been of real assistance in the diagnosis of the many obscure cases that have arisen in the course of military practice during the last four years. However much we may owe to the physiologists and the clinical pathologists for advance in knowledge of general medicine, there must always remain a vast number of cases which no instrumental investigations will suffice to explain. The human body, especially if it has suffered shock of any kind, will not always respond equally to tests. The irregularity of response must in itself be made a subject of study, and it is by such patient investigations as have been carried out by Mackenzie, Head, and others that the significance of local pain and tenderness as an expression of visceral disorder is gradually becoming recognized as a means of practical diagnosis.

In the third edition of *Symptoms and Their Interpretation*,[2] now before us, there appear two appendices. One of them deals with some observations by Mr. Ligat, recorded during 1916, to prove the diagnostic importance of hyperalgesia of the skin of the abdominal wall as an indication of visceral disease. After investigation of a large number of cases he was able to show that such tenderness could

[1] The contributions to the Congress will appear in the *Transactions* of the Ophthalmological Society of the United Kingdom, to which body the Congress is now affiliated.

[2] *Symptoms and Their Interpretation*. By Sir James Mackenzie, M.D., F.R.S., LL.D.(Aberd. and Edin.), F.R.C.P., F.R.C.P.I. Third edition. London: Shaw and Son. 1918. (Demy 8vo, pp. xx + 318; 19 figures. 8s. 6d. net.)

be mapped out into definite areas according to the organs involved, thus supporting in a very convincing manner the conclusions previously arrived at by others.

In his second appendix the author offers some advice to intending research workers which may well be taken to heart as coming from one who has had exceptional opportunities for judging the conditions of success and failure in the past. He deplores the waste of time and energy which has too often occurred owing to want of previous clinical experience on the part of the researcher, and would require him to have a clear conception of the object in view in order to avoid futile investigations. The qualities needed for successful research are not possessed by every one, and no amount of enthusiasm will supply their place. The clinical indications of incipient disease are always calling for more precise study, but it is obvious that the hospital ward is not the place in which it can be pursued. It is to the family practitioner that such early symptoms are revealed, but under existing conditions it is almost hopeless to look to him for systematic research work. Moreover, in the vast majority of cases the earliest indications are not regarded, and the doctor's aid is not sought until something definite occurs. Only in a very limited number of instances would patients who do not regard themselves as ailing submit to the frequent supervision and examination that would be required to carry out effective research. Even with the consent of the patient, the average practitioner is not, as a rule, in the position to carry out systematic investigation. His training in that respect has not prepared him to form anything more precise than a general impression. The early stages of disease, its progress, and the action of remedies, together with the management of the lives of individuals with impaired health, are all subjects calling for further research. But the researcher must be trained to observe, and he must have practical knowledge of the directions in which special information is to be pursued. Sir James Mackenzie's book should help him on his way.

THE EAST AFRICAN CAMPAIGN.

MR. R. V. DOLBEY, M.S.Lond., F.R.C.S., who was in London on a holiday from British Columbia in August, 1914, and at once joined the R.A.M.C., published fifteen months ago, in a volume entitled *A Regimental Surgeon in War and Prison*, an account of his experiences, first with the British Expeditionary Force until he was taken prisoner in October during the first battle of Ypres, and then during the winter of 1914–15, when the German officers in charge of prison camps, by a mixture of brutality and incompetence, inflicted horrible hardships on the soldiers and civilians who had fallen into their clutches. What the German officer was in Flanders and the prison camps such he was also in East Africa—arrogant, callous and bombastic in success, and abjectly self-pitying when things went wrong for him. Those who remember Captain Dolbey's earlier book will look forward to reading his new volume, *Sketches of the East Africa Campaign*,[3] and they will not be disappointed, for though it is not a connected narrative but a succession of sketches concerned with General Smuts's operations in 1916, it gives an insight into the difficulties and hardships of a prolonged campaign about which comparatively little has been heard in this country.

The Germans had in Colonel von Lettow a leader of great energy and resource, who knew the country well and seems fully to have understood the importance of feeding the white man in the tropics. The British forces were not so well off in this respect, for the Germans were falling back towards their bases while the British line of communications through a country with few or no roads was constantly lengthening. The great scourge was malaria; there were not a few cases of cerebral malaria and many of blackwater fever, in the treatment of which Captain Dolbey praises salvarsan and subcutaneous saline injections. Fighting troops on the move through bush cannot use mosquito nets, but "mosquito oil," a mixture of citronella, camphor, and paraffin, the author says, will protect the face and hands for six hours at least. There were not wanting minor scourges also—tick fever, so called because it is due to a spirillum carried by a tick that lives in the soft floor of native houses, the three-day fever transmitted by the sandfly, and the skin affections produced by the botfly and the jigger, the last named so great a pest that Captain Dolbey says "at least 5 per cent. of our army, both white and native, are constantly incapacitated. Hundreds of toenails have I removed for this cause alone." Captain Dolbey describes two operating theatres he set up, the one at Handeni in a German gaol converted into a hospital, and the other at Morogora, where he had excellent service from a German sister. At both he had as operating-room orderlies Nazoro from the shores of Tanganyika and Ali, of gentler manners but less trustworthy.

The forces on both sides consisted largely of Africans, but the British included detachments of the Indian army, which gave a good account of themselves. The book contains a number of illustrations, including some German photographs which fell into British hands.

[3] *Sketches of the East Africa Campaign.* By Captain Robert V. Dolbey, R.A.M.C. London: John Murray. 1918. (Cr. 8vo, pp. xxi + 219. 6s. net.)

LORD LISTER'S LIFE.

SIR RICKMAN GODLEE'S biography of *Lord Lister*,[4] published in November last, has reached a second edition. Dr. W. W. Keen of Philadelphia wrote in his review of the book in *Science* last month that "as a biography the story is too detailed to be easy perusal for the non-medical reader." General observation and the appearance so soon of a new edition encourages a more generous view of the non-medical reader, who, like Dr. Keen, has in considerable number realized that the book "is more than a biography. It is an important historical document." Dr. Keen gives some personal reminiscences of Lister's visit to America in 1876 to attend an international congress held in Philadelphia during the Centennial Exhibition there.

> There (he writes) I saw, heard, and met Lister for the first time. The general tone of the discussion in the surgical section, of which Lister was chairman, with the exception of a few, was that the system was little if anything more than "surgical cleanliness"! I was an attentive listener, was wholly converted to Lister's views, and began to practise his method when I went on duty at St. Mary's Hospital, October 1st, 1876, and have never for a moment ceased to be an enthusiastic disciple. My results were marvellously different from what they had been in the same hospital for ten years. "Experientia docet." I *know* whereof I speak by bitter prior experience.

The new edition is substantially identical with the first. A few slight changes and additions have been made; one or two mistakes, chiefly in dates, detected by the author rather than by his reviewers, have been corrected, and the index has been made fuller.

[4] *Lord Lister.* By Sir Rickman John Godlee, Bt., K.C.V.O., M.S., F.R.C.S. Second edition. London: Macmillan and Co., Ltd. 1918. (Med. 8vo, pp. xix + 681; illustrated. 18s. net.)

NOTES ON BOOKS.

THE second edition of Professor C. D. AARON'S large book on *Diseases of the Digestive Organs*,[5] written with especial reference to diagnosis and treatment, is a comprehensive and well-illustrated volume, fully up to date. It is meant for the practitioner of medicine as well as the specialist, and may fairly be said to meet the needs of both. It may be recommended as a full and practical treatise on diseases of the alimentary tract.

So many dramatic and even slightly feverish textbooks are put before the medical student nowadays that it is quite a relief to meet with one that still adheres to the old-fashioned and conservative lines of last century. Dr. THACHER'S edition of AUSTIN FLINT'S *Manual of Physical Diagnosis*[6] may be described as one of these. It deals chiefly with the use of percussion and auscultation in diseases of the chest, and at the end of the volume is a short chapter on examination of the abdomen. The text has been brought up to date by the editor, and for clearness and conciseness leaves nothing to be desired. The book may be warmly recommended to medical students anxious to learn how to make the best use of their hands and ears in diagnosis.

[5] *Diseases of the Digestive Organs; with Special Reference to their Diagnosis and Treatment.* By Charles D. Aaron, Sc.D., M.D., Professor of Gastro-enterology in the Detroit College of Medicine and Surgery, etc. Philadelphia and New York: Lea and Febiger. 1918. (Roy. 8vo, pp. 818; 156 figures, 48 rontgenograms, 9 coloured plates. 7.50 dols.)

[6] *A Manual of Physical Diagnosis.* By Austin Flint, M.D., LL.D. Seventh edition, revised by Henry C. Thacher, M.S., M.D. Philadelphia and New York: Lea and Febiger. 1917. (Post 8vo, pp. 331; 26 figures. 2.50 dols.)

Dr. S. YOUNG'S admirable textbook on *Stoichiometry*,[1] now in its second edition, is one for teachers and advanced students of chemistry. It may be explained that "stoichiometry" is a hideous word connoting the measurement of chemical combination in definite proportions, and its application to quantitative chemical calculations. Dr. Young's book is a thoroughgoing account of physical chemistry from what may be called the quantitative point of view, with chapters on the determination of atomic weights and on the periodic law. The treatment is mathematical throughout.

[1] *Stoichiometry.* By Sydney Young, D.Sc., F.R.S. Textbooks of Physical Chemistry, edited by Sir William Ramsay, K.C.B., F.R.S. Second edition. London: Longmans, Green and Co. 1918. (Demy 8vo, pp. xiv. + 363; 93 figures. 12s. 6d. net.)

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND.

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THE following subscriptions and donations to the Fund have been received during the fortnight ending July 22nd:

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* Per Dr. Des Vœux.
† Per Sir Thomas Barlow.
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§ Per Dr. Herbert Spencer.

Subscriptions to the Fund should be sent to the Treasurer, Dr. H. A. Des Vœux, at 14, Buckingham Gate, London, S.W.1, and should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund, crossed Lloyds Bank, Limited.

SPECIAL RATIONS FOR INVALIDS.

NEW REGULATIONS AS TO PERMITS.

IN the JOURNAL of March 9th, 1918, we published the regulations as to the granting of certificates to invalids for extra quantities of certain foods, which had been made by the Ministry of Food. The question of the special needs of invalids has received continuous attention from the Ministry and its medical advisers, and the Food Controller has now issued, in connexion with the scheme of national rationing introduced on July 14th, fresh regulations and a revised list of diseases for which, when extra rations are medically certified to be necessary, food control committees may make grants without reference to the Ministry.

The new regulations have been made after consultation with the advisory committee nominated by the Committee of Reference of the Royal Colleges of Physicians and Surgeons, and with representatives of the Medico-Political Committee of the British Medical Association. The general procedure is given in Memorandum N.R.3, summaries of which have appeared in the lay press this week. It does not apply to Ireland, where special arrangements are in force.

Application Forms and Certificates.

Application must in all cases be made to the food control committee of the district in which the patient lives, and not to the Ministry of Food direct. Extra rations, or white flour as the case may be, can only be purchased by means of authorities issued by food control committees, and may not be supplied by retailers on doctors' certificates without such authority. Application forms can be obtained from local food offices.

Applications for extra invalid rations of meat, butter, or margarine, and for extra sugar must be made on Form N. 36; applications for white flour on Form N. 8; applications from expectant mothers on Form M. 55. No applications need be made on behalf of nursing mothers as such, since they can obtain the infant's ration without a doctor's certificate. Form N. 36 gives the headings of a certificate to be filled up and signed by the medical attendant in charge of the case stating the disease from which the patient is suffering, and specifying the minimum amounts of the food in question which in his opinion are required by the patient each week.

Certificates should be clearly written, and in addition to stating the name of the disease should give some indication of its stage or seriousness, and it will be of assistance to the medical advisers of the Ministry if the general nature of the patient's diet is also indicated. In no case will extra meat be sanctioned for making beef-tea, for which purpose meat extract, with or without the addition of milk powder, may be used.

Information for Medical Practitioners.

The Ministry of Food has also published special leaflets (N.R. 5 and N.R. 5A) for the use of medical practitioners only, indicating more precisely the circumstances in which special rations may be ordered for invalids and the diseases for which extra rations may be granted by food control committees. These leaflets are to be circulated to registered medical practitioners by local food offices, and may be obtained on application to those offices.

The Food Controller fully understands the difficult position in which doctors are sometimes placed when asked to sign certificates for extra rations, but he relies upon the profession to help him in safeguarding the national food supplies by giving certificates only in those cases in which extra allowances of rationed foods are essential. It is clear that any extension of the privileges already granted might give rise to abuse through the importunity of patients; the Ministry is therefore anxious that medical practitioners should be on their guard as far as possible against furnishing certificates lightly. Importunate patients should be reminded that a doctor has no power to grant extra rations, but only to recommend a case for such a grant when he is convinced of its necessity; and that the final responsibility for giving or withholding a grant rests with the Ministry of Food, which has to take into account not only the needs of the individual, but also the state of the national supplies.

Extra Meat and Fats.

Leaflet N.R. 5A gives a list of diseases in which committees may grant extra rations of meat, butter, and

margarine, where medically certified to be essential, together with the maximum weekly quantities (inclusive of the ordinary ration) which can be allowed in any case, and the maximum period for which the allowance may be made. Eight classes of case are recognized:

1. Active tuberculosis, pulmonary or otherwise.
2. Diabetes and glycosuria.
3. Graves's disease (exophthalmic goitre).
4. Pernicious anaemia.
5. Cancer.
6. Senile dyspepsia.
7. Convalescence after severe illness, severe operation, or serious loss of blood (including childbirth in which the child does not survive).
8. Infantile diarrhoea and wasting (marasmus). In the case of children under 2 years suffering from this complaint, committees may grant extra meat up to 2 lb. a week for a maximum of four weeks for the purpose of making raw beef juice where certified necessary by the doctor.

In writing certificates for cases of tuberculosis it is important to use the word "tuberculosis." If it is desired to avoid the use of the word "cancer" on the certificate, such terms as "new growth," "malignant disease," "neoplasm," or "epithelioma" may be used. Applications for extra rations of meat and fat for patients with diseases other than those just mentioned must be forwarded by the local food office to the Medical Section of the Ministry. It is found that the terms "pancreatic insufficiency" and "coeliac disease" are used so loosely that any certificates bearing these diagnoses alone can no longer be recognized; hence, a brief statement of the patient's symptoms should be supplied as well.

Where a patient is medically certified as being unable for a specified reason to take one or other of the following foods—butcher's meat, bacon, or butter—his rations may be interchanged at the discretion of the committee in the following proportions: One weekly butcher's meat coupon = one weekly bacon coupon = one monthly butter-margarine coupon. This arrangement does not, however, apply to cases falling into the eight classes mentioned above. If in any such case the question of interchange arises so as to cause the maximum ration to be exceeded, the application will be referred to the Ministry as an exceptional case.

White Flour.

The Food Controller is advised that no ordinary disease requires bread made from white flour, and its use must be confined to special cases in which it is essential. Applications for white flour must be made separately on Form N. 8. Leaflet N. R. 5A gives a schedule of diseases for which the food control committees will have power to grant permits for not more than 14 lb. of white flour in all, which should last six weeks. The diseases are:

Active gastric ulcer.
Active duodenal ulcer.
Malignant disease of the stomach (gastric carcinoma).
Senile dyspepsia.
Chronic diarrhoea.
Intestinal ulceration.

By "active" gastric or duodenal ulcer is meant either that stage of the disease in which the patient is undergoing treatment in bed, or a convalescent period immediately following it. The term "senile dyspepsia" is used for that form of flatulent indigestion often met with in aged persons in association with chronic bronchitis or cardiac weakness.

In the case of senile dyspepsia or gastric carcinoma, applications for renewal may be granted by food control committees without fresh medical certificates; in all other cases applications for renewal must be made on a fresh form—N.8—and forwarded to the Invalids' Flour Subsection, Medical Section, Ministry of Food, 29, Upper Grosvenor Street, W.1.

With regard to diseases not mentioned in the schedule, it is hoped that medical practitioners will only sign certificates in such cases when convinced that the present bread is unsuitable even when toasted.

Sugar: Milk.

Patients medically certified to be unable, for some reason specified on Form N. 36, to take solid food may be granted extra rations of sugar for a period not exceeding four weeks, but no grant of extra sugar will be made to any patient who is receiving any invalid's rations of meat, butter, or margarine. The total sugar, including the ordinary ration, must not exceed 1 lb. a week, except in the case of tube-fed patients. No extra sugar is allowed for bottle-fed babies. Generally speaking, extra sugar will only be granted to patients certified to be unable to take solid food either by reason of difficulty in swallowing or because their disease necessitates a "slop diet." The nature of the disease and the general character of the diet should always be stated in the certificate. The ordinary sugar ration is regarded as sufficient for artificially fed infants and healthy children.

Food committees may issue a ticket for priority in the supply of milk to any person who is entitled for reasons of health to a specified quantity of milk per diem. Doctors are asked to recommend milk rather than extra allowances of meat and butter wherever this will meet the needs of the patient, since extra rations can only be granted when the patient cannot obtain sufficient nourishment in unrationed foods.

Expectant and Nursing Mothers.

Expectant mothers during the last three months of pregnancy may be granted two extra meat coupons a week, or one butter and margarine coupon a week, on production of a certificate on Form M. 55, signed by a doctor or by a certified midwife. Provision is made for nursing mothers by the issue to infants from birth of the ordinary child's ration as well as a priority certificate for milk. In the event of stillbirth or the death of the infant within one month, the mother may, if this is medically certified as necessary, receive the allowance permitted for severe illness or after operation. Moreover, expectant and nursing mothers attending approved maternity feeding centres may receive meat at such centres free of coupon up to 12 oz. per head per week.

Emergencies and Special Cases.

In cases of grave emergency, where the doctor certifies that the life of the patient is in danger unless extra rations are granted, committees may grant extra rations, for one week only, up to a maximum (including the ordinary ration) of butcher's meat 2 lb., butter and margarine twice the ordinary ration. Beyond the first week applications for extension or renewal must be referred to the Special Diseases Subsection on Form N. 36, the envelope being marked "Grave emergency."

While it is not the practice of the Ministry to grant extra rations to discharged soldiers and sailors in the absence of definite medical grounds duly certified, special consideration is usually given to applications made by them on such grounds. Survivors from torpedoed or shipwrecked vessels, who have been subjected to serious privations and are medically certified on Form N. 36 to need additional rationed foods, may be granted invalids' special rations on the same scale as convalescents after serious illness.

Lastly, exceptional cases of disease not covered by the provisions set out above may be referred to the Special Diseases Subsection; but such application must be supported by strong medical certificates, and grants will only be made in very exceptional circumstances.

It will be seen that the responsibility falling upon the medical profession in connexion with certificates for special rations is heavy, and may place them at times in an invidious position. The leaflets issued by the Ministry for their special guidance should be studied with care.

THE Franco-Anglo-American League for combating cancer was formed not long ago in France. Among the founders are many medical notabilities—French, British, and American. The President is M. Justin Godart, formerly Under Secretary of State for the Health Services of the French army. A leading part in the organization of the league has been taken by Dr. Hartmann, professor of clinical surgery in the Paris Faculty and surgeon to the Hôtel-Dieu. Its objects are the creation of centres of treatment for patients, especially soldiers and refugees, suffering from cancer; the prosecution of research on the nature, causes, and prevention of cancer; the dissemination of elementary knowledge as to the earliest symptoms of cancer, so that they may be dealt with before the disease has become incurable, and the creation of teaching centres. The chief centre is in Paris, and others are being established in the university towns of France. One has already been formed at Bordeaux on the initiative of Professor Chavannaz; another at Lyons under that of Professor Bérard with the co-operation of Dr. Auguste Lumière, who has placed his laboratories at the disposal of investigators; and a third at Montpellier by Professor Forgues. In the work of the league special attention will be devoted to a study of the use that can be made of radium and the Roentgen rays in the non-surgical treatment of malignant disease.

British Medical Journal.

SATURDAY, JULY 27TH, 1918.

MEDICAL VISITORS IN GREAT BRITAIN.

ENGLAND—let us, even with the fear of the hospitable Scot before our eyes, say Great Britain—is a country whose friendly feeling towards her allies has not found adequate expression, and is therefore very imperfectly understood. Especially would we wish that medical officers of the great Overseas Dominions and of the American Army should understand that we mean well, though, like the Scots lover, we may be gey slow in the comin' on.

We of the same tongue, the same ideals, and the same blood, want more occasions to know each other socially, and better opportunities to learn from each other scientifically. Can it be said that the medical officers of the Overseas Forces who, these last four years, have been with us more or less continuously, or have come here on leave or duty from France or the Mediterranean, have found either the social welcome or the scientific comradeship they had the right to expect? We fear that the answer must be in the negative. We have perhaps thought ourselves too busy; it is true that the teaching staffs of the medical schools have been depleted, and those members of them still on duty heavily occupied in war work, but the regrettable fact remains that there has been little attempt to organize any system of putting our visitors in the way of meeting members of the profession in this country socially and informally, or of helping them to see the work done in the hospitals. It is not yet too late to take advantage of this great opportunity of proving to the medical officers of the Overseas Forces that we hope the time they spend here will be both pleasant and profitable, that the wish is that every possible facility for following the progress of military and civil medicine, surgery and pathology may be freely open to them, and that we ardently desire that they shall take back with them friendly remembrances.

The arrival of so many American medical officers in Europe and their presence from time to time in this country is another reason for setting our house in order. While the war lasts we would like them to look upon Great Britain as a second social and scientific home. The spirit in which our American colleagues have come into this war has been admirable and enviable. They have with utmost frankness said: "We want you to tell us all you know, the mistakes you have made and how you have righted them, so that, as nearly as possible, we may start in where you are now." They will not doubt that it is our desire that they should benefit by anything that experience and research have taught us, well knowing, indeed, that they will return good measure heaped up and overflowing. In France we believe such store as we have has been very freely opened, but the same cannot be as fully said of our achievements at home.

The fault, if fault there be, has not been all on one side, for the efforts made from early days have not always met with a response as general as was hoped. The British Medical Association invited Overseas medical officers to make use of its library and reading-room and extended the invitation to American medical officers so soon as they began to come to or through this country; the possibility of doing something more is being raised at the Annual Representative Meeting this week. The Royal Society of Medicine, which has one of the two finest medical libraries in the country, has invited Overseas and American medical officers to make use of it and to attend its scientific meetings; through its energetic secretary, Mr. MacAlister, it has offered literary assistance in the way of furnishing references and abstracts, and has also done much to supply information as to facilities for seeing hospital work in London.

It is to be feared, however, that too much has been left to individual effort and to chance, and we are glad to learn that steps will probably be taken to set up some temporary organization for collecting information of the kind our visitors need, and devising means for bringing it to their notice more prominently and continuously than has hitherto been found possible. If the plan is to have all the success desired, the co-operation of the senior officers of the Army Medical Services will be needed. We hope that the Directors-General and the Directors and Deputy Directors of Medical Services of the British Overseas and American Forces abroad will be disposed to assist the idea by consenting to make known officially any arrangements that can be made in Great Britain.

In speaking of the need for a temporary plan now we are quite well aware that we are touching only the fringe of a much larger subject—the need for the organization of post-graduate teaching in London on a larger scale and sounder footing than has existed in the past. The British Universities show encouraging signs of a disposition to take steps to induce young graduates from the Overseas Dominions, from the United States, and from the Continent, who have hitherto been in the habit of going to Germany, to come after the war to this country instead; but, as Sir Richard Lodge said at the graduation ceremony in Edinburgh the other day, if the Universities are to be successful in this effort they must be able to offer not only a degree but also training, and facilities for special study and research. Gallant efforts have been made from time to time in London, but the want of success of the London Polyclinic is sufficient to show that there was something wrong with the methods adopted. There is reason to hope that a satisfactory scheme permanently to fill the existing want will shortly be evolved, for we know that the subject has had serious consideration. It is, however, too soon to discuss here the steps that should be taken.

THE PANDEMIC OF INFLUENZA.

THE influenzal pandemic has been on the wane for the past two or three weeks, so far as our present advices report, both in this country and among our troops and allies on the Continent. It has already given rise to a great quantity of ephemeral medical literature, and no doubt in the future will form the subject of more deeply studied and even laboured official reports. Is it possible, meanwhile, to draw any definite conclusions as to its origin and nature? There seems good reason for supposing that it came to us from Spain, in the first instance, in April last. It is generally agreed that it is an acute bacterial infection, and the general consensus of opinion seems to indicate Pfeiffer's *Bacillus influenzae* as the infecting agent. But by no means all the medical men and bacteriologists who have investigated the epidemic will agree with so summary a generalization.

In some instances Fraenkel's pneumococcus has been indicated as the cause of this "influenza"; it would be interesting to know how far such pneumo-

cocci would prove pathogenic on inoculation into experimental animals. Other investigators have found a Gram-negative micrococcus, resembling the meningococcus at first sight but later proving to be a *Micrococcus catarrhalis*, to which the local epidemic was attributed. Others, again, have found true pneumobacilli; and others have found various organisms in combination, and are inclined to attribute the disease to a combination of, say, *M. catarrhalis* and *B. influenzae*, as do Surgeon Gotch and Captain Whittingham, on page 82 of this issue. It is true that such a symbiosis is not common in the diseases of human beings, although it may occur in scarlet fever. But in the large majority of localities Pfeiffer's bacillus has been found, both in this country and on the Continent, in a greater or smaller percentage of the throat swabs taken from the patients, and more often, we believe, in the expectoration in cases complicated by bronchitis or bronchopneumonia. An involvement of the kidneys, such as Gotch and Whittingham describe as common, has not been generally noted.

The importance of acute pulmonary infections, in the production of trench nephritis, for example, is a point that has not infrequently been raised in recent years; it would seem that *post-mortem* evidence of an acute infection of the kidneys has been met with in fatal cases of influenza during the past two months, but only exceptionally. As a rule death has been caused by acute asphyxiating bronchiolitis or by bronchopneumonia, due in most instances to Pfeiffer's bacillus; no single variety of *post-mortem* findings can be described as typical, and this is perhaps natural in view of the fact that the patients dying of this influenza are for the most part the older patients with lungs already diseased—adherent, emphysematous, bronchitic, or what not. This may account for the fact that the mortality has been set as high as between 1 and 2 per cent. in some of the recent reports of local influenzal epidemics; absolutely, of course, such a figure is low, but in view of the general mildness of the disease as we have recently seen it, it may be looked upon as relatively high.

That we have to do with anything other than a pandemic of influenza may fairly be regarded as most unlikely. Certainly some investigators have failed to isolate the influenza bacillus from the secretions of some or all of their "influenza" patients, but this is a phenomenon not rare in true influenzal epidemics. The suggestion that we have to do with an outbreak of glandular fever rather than influenza is supported by Captain Burnford's observation, recorded in our last issue, that the patients have a general lymphadenitis, or enlargement of the lymphatic glands. But is such an enlargement ever absent in any large percentage of our soldiers, sick or well? Probably not; in fact, we cannot regard his arguments in favour of some diagnosis other than that of influenza as conclusive.

A VENEREAL MATERNITY CENTRE.

In the JOURNAL of January 12th, when discussing the problem of congenital syphilis, we made passing reference to the venereal centre for pregnant women which the guardians of the City of London Union have established at Thavies Inn under the charge of Dr. John Adams. The experiment of grouping together as in-patients parturient women suffering from venereal disease was begun in September last under the auspices of the Local Government Board and the Metropolitan Asylums Board. The premises at Thavies Inn were built for the purpose of an infirmary, and were adapted without difficulty to the special requirements of a small lying-in hospital. Every case is investigated and reported on very fully, in accordance with a special scheme of note-taking devised by Dr. Adams, and the pathological work of the centre is carried out by Dr. A. E. Stansfeld at St. Bartholomew's Hospital. It was contemplated at first that the work would be mainly connected with the mothers, but as time went on it has been extended to the treatment of the newborn babies with antisyphilitic remedies. A large room on the ground floor has been converted by means of partitions into a labour ward and treatment room. The routine treatment for syphilitic mothers is by intravenous injections of galyl or novarsenobillon, before and after labour. The infants receive intramuscular injections of galyl in glucose; the first injection is given between the seventh and tenth day, sometimes earlier, and the dose is repeated weekly or fortnightly. Both mother and infant also receive intramuscular injections with mercurial cream, the B.P.C. 40 per cent. preparation being used. Up to the present nineteen children of syphilitic mothers have received antisyphilitic treatment, and there has been one death only, that of an eight months baby. With few exceptions the infants gave strong positive Wassermann reactions when born. The weights are taken weekly and recorded on the case-sheets. The treatment has produced no apparent ill effects, and all the infants (except one whose mother's milk was poor) have gained steadily in weight, whilst the tendency has been for the Wassermann reaction to become less strongly positive, and in several instances a negative result has already been obtained. Thirteen infants have left the centre, but seven or eight of these still come up for fortnightly inspections and treatment. The results so so far are encouraging, and although it is still quite in the experimental stage, the work of the Thavies Inn centre would appear to open out a fruitful field for research.

PICRIC ACID JAUNDICE.

Since the outbreak of war the consumption of picric acid, with the intention of imitating jaundice and so escaping military service, has attracted a good deal of attention. Epidemics of this spurious jaundice have been described, and the medical journals, especially in France, have contained a number of articles on the subject, the first as long ago as 1914 by Garnier, Vannier, and Roussille.[1] Marie[2] contributed an excellent critical review last year, and quite recently Malmjac and Lioust,[3] from an examination of the urines of 1,029 cases of real or simulated jaundice, have isolated 129 cases of picric acid jaundice. Five, ten, or fifteen grains of picric acid taken internally in one, two, or three doses irritate the alimentary canal, causing vomiting and diarrhoea, and turn the urine pomegranate red; much of the picric acid is removed by vomiting and in the loose stools, but there is always enough to stain the skin and conjunctivae yellow, the blood serum being yellow, instead of green as in ordinary jaundice, and the cerebro-spinal fluid also yellow. Some discussion has taken place as to the excretion in the urine which begins three hours after the acid is taken; Malmjac and Lioust state that for the first twenty-four hours picric acid is found in the urine, and that after this its amino-derivative picramic acid (dinitro-amino-phenol) appears, and that its amount, relative to that of picric acid, progressively increases, the urinary excretion of the acids continuing on an average for twenty, but sometimes for as long as thirty or even forty days. They also state that the skin of the head excretes picric acid only, while from the surface of the abdomen, armpits and groins both picric and picramic acid can be obtained. Except for the initial gastro-intestinal symptoms and the pigmentation of the skin and mucous

[1] Garnier, Vannier, et Roussille, *Arch. de méd. et de pharm. mil.* Paris, 1914, lxiii, 361.
[2] P. L. Marie, *Ann. de méd.*, Paris, 1917, iv, 85–107.
[3] Malmjac et Lioust. *Journ. de physiol. et path. gén.*, Paris, 1918, xvii, 685–691.

surfaces there may be no symptoms at all; but in susceptible persons and after large doses the cells of the liver may be affected and bile may appear in the blood serum and the urine, so that there is a true jaundice due to picric acid; this is likely to occur about the eighth to the ninth day after the picric acid is taken. Among their 129 cases Malmjac and Lioust found urobilin present in 35 per cent., bile acids in 27 per cent., bile pigment alone in 7 per cent., and both bile acids and pigment in 17 per cent. The presence of bile in the urine does not interfere with the chemical detection of picric and picramic acids. The presence of these acids makes it highly probable that the acid has been taken by the mouth, for observations appear to show that workers in munition factories do not absorb enough picric acid to allow of its detection in the urine. Pauly,[1] however, published a case of acute yellow atrophy of the liver in a female munition worker, and, by a process of exclusion of other causes, ascribed it to the toxic effects of melinite which contains picric acid, but the urine was not examined for picric or picramic acid. The liver weighed 21 oz. In ordinary obstructive jaundice bile appears in the urine from the onset in considerable quantities, whereas when bile is found in the urine of persons who have swallowed picric acid, it is not until after a week's interval that bile, and then in relatively small quantities, is detected in the urine.

THE ANTI-BERI-BERI VITAMINE.

In 1914 Braddon and Cooper and also Funk published experiments which they thought showed that when fowls or pigeons are fed on polished rice or starch, with or without a fixed amount of the antineuritic vitamine, polyneuritis comes on sooner if the proportion of carbohydrate in the food is increased, and on these grounds they concluded that the antineuritic vitamine plays an active part in carbohydrate metabolism. As this is in direct contradiction to Vedder and Clark's experimental work, Vedder[2] has returned to the subject, for the question is not only of scientific interest, but of practical importance; the physiologist requires an exact knowledge of the part played by vitamines, and it is essential that the sanitarian and physician should be provided with precise information as to the amount of vitamine-containing food necessary in the diet. Vedder believes that for the building up of the body, especially of the nervous system, a definite supply of vitamine is required, varying slightly with the individual and the amount of work done, but quite irrespective of the quantity of carbohydrate in the dietary. On the other hand, if Braddon and Cooper and Funk are correct in their interpretation, it follows that the more carbohydrate is eaten the more vitamine must be supplied. Vedder's fresh experiments appear to prove that the antineuritic vitamine is not concerned in carbohydrate metabolism, and justify the practical corollary that in arranging a diet to prevent the onset of beri-beri it is sufficient to ensure the consumption of the amount of antineuritic foodstuffs (beans, rice polishings, barley, etc.) that experience has shown will prevent the appearance of the disease, without any reference to the quantity of carbohydrate consumed.

SERUM TREATMENT IN SCARLET FEVER.

In an excellent paper on the treatment of scarlet fever with the serum derived from patients convalescing from the disease, Drs. Kling and Widfelt[3] report results that must be regarded as highly satisfactory. A severe epidemic of scarlet fever began in Stockholm about August, 1916, slowly dying down after May, 1917. In twelve months from September, 1916, there were 2,165 cases, with 152 deaths; 327 of the cases were classed as "severe." The serum employed was taken from convalescent scarlet fever patients from four to seven weeks after the onset of the disease; the blood was drawn off by the insertion of a coarse aspiration needle into a vein at the bend of the elbow, an adult yielding 200 or 300 c.cm., a child 200 c.cm. or less. The serum was drawn from the clot forty-eight hours later, 200 to 300 c.cm. blood giving 50 to 150 c.cm. serum. This was tested for Wassermann's reaction, which proved positive in 10 out of 196 samples, and for the presence of bacteria by culture in deep glucose-agar tubes (to exclude the presence of anaërobes). Carbolic acid was added as antiseptic to 0.5 per cent. Thus prepared the antiscarlatinal serum was kept on ice until used, usually for two or three weeks. The number of patients with severe attacks of scarlet fever treated with it was 237. Whenever possible (202 cases) the intravenous route was chosen for the administration; if no adequate vein could be found, it was given by intramuscular injection. Children under 5 received 20 to 25 c.cm., big children and adults from 40 to 60 c.cm.; in most cases a single dose was enough. The serum was first employed in the middle of November, 1916, and it is noted that the first three patients receiving it died; but the early mortality, which had averaged 50.5 per cent. among the 91 severe cases treated without the serum, fell to 10.5 per cent. in the 237 severe cases that received the serum. The late mortality among the severe cases was 19.8 per cent. before and 7.2 per cent. after the use of the serum was instituted. The total mortality among the severe cases was 70.3 per cent. without and 17.7 per cent. with the use of the serum. The serum treatment usually brought about a critical fall of 2° or 3° C. in the patient's temperature within twenty-four hours in straightforward cases, with great improvement in the general condition, and often a deep and refreshing sleep, the pulse-rate falling from 140–160 to 100 or less. This was the case in 101 out of 115 such instances. The action of the serum was less well marked in 80 patients with complications (lymphadenitis, purulent rhinitis, otitis, and so forth), but none the less an improvement was generally observable. Nothing like severe serum sickness was seen in any of the patients treated with the serum; a few had a brief rigor soon after its injection, and half a dozen exhibited a slight urticaria that may or may not have been due to its use. It is noted that 111 out of the 186 samples of serum employed were used alone, unmixed; 43 of these 111 were derived from mild cases of scarlet fever, 56 from moderately severe, and 12 from severe cases. Good therapeutic results were obtained from 60, 66, and 66 per cent. respectively of these three varieties of serum; whether the serum was taken from the patient in the fourth, fifth, sixth, or seventh week after the onset of the fever seemed to make no difference to its therapeutic value. The earlier the antiscarlatinal serum was administered to the patient the better the results obtained—if in the first three days, over 90 per cent. of cures, whereas 5 out of the 10 patients receiving it on the sixth day died. The serum seemed not to lose its value after keeping for two months. As for the avoidance of scarlatinal complications by the patients treated with the serum, the hopes the authors at first felt were, as they say, soon gravelled; thus there were 21 per cent. of cases of nephritis among 212 of the serum-treated patients, and 21.5 per cent. among 1,923 other cases in the same Stockholm epidemic. Otitis, mastoiditis, and lymphadenitis seemed commoner among the patients who did not receive the antiscarlatinal serum. In conclusion the authors state their belief that the human antiserum is specific against scarlet fever and its presumably invisible virus; the superadded streptococcal infection common in scarlatina is left untouched by the human serum, and should perhaps be combated by the use of a suitable antistreptococcal serum. They think their human antiserum is both antitoxic and bactericidal.

[1] R. Pauly, *Lyon méd.*, 1917, cxxvi, 61–62.
[2] E. B. Vedder, *Journ. Hyg.*, Cambridge, 1918, xvii, 1–9.
[3] C. Kling and G. Widfelt, *Hygiea*, Stockholm, 1918, lxxx, 2.

THE HERRING HARVEST.

AMONG fish the herring comes next after the sprat as a cheap source of protein and fat. For a shilling the sprat yields 2,640 calories and the herring 1,320, the difference being partly accounted for by the waste of 18 per cent. in the herring since the bones and head are not eaten, while it is reckoned that the whole of the sprat is consumed. Professor D'Arcy Thompson devoted a recent Chadwick lecture to the natural history and commercial importance of the herring. The herring lives near the surface, and draws its nutriment from the minute and microscopic life which there abounds. The herring swims mouth open, drawing large quantities of water through a complicated gill system which forms an exquisitely complete sieve. Unlike other fish that live at the bottom of the sea, picking up small shellfish, crabs, and worms, there are no bounds to the herring's food, and it becomes more abundant where the microscopic life of the sea is plentiful. Professor Thompson made an elaborate calculation as to the number of herrings from which the harvest is drawn. A good-sized shoal of herrings might measure seven or eight miles in length and two to three or four miles in breadth, and was at least twenty feet deep. A rough estimate would be one herring to every cubic foot of water. Such a shoal would probably contain 10,000,000,000 herrings, and there were many such shoals, for the herring was found in the White Sea, on the coasts of Iceland and Canada, and of the North and South of Scotland, all through the North Sea, and in many other places. The total annual catch of the Scottish fisheries only represented about one-fifth of a single shoal, and the total annual catch of the English fisheries rather less. The entire catch of Northern Europe did not equal the number of herrings in a single shoal. The great increase in the Scottish herring fisheries dated from Huxley's Commission, which was instructed to report as to what regulations were necessary and desirable. Huxley's conclusion was that no regulations were required, and the acceptance of this opinion was shortly followed by an immense increase in the take of herrings dating from 1870. A regulation swept away by the Huxley Commission was that the nets should have an inch mesh; but herrings varied in size on different parts of the coast. The largest herring came from Stornoway; those from Lowestoft and Yarmouth were smaller. As the nets shrank somewhat rapidly in the salt water, the fishermen began with the fresh nets at Stornoway in the spring, and in the autumn, when they had shrunk, used them for the smaller fishes of Lowestoft. The prosperity of the herring industry very often coincided with the prosperity of nations, and the history of the herring fishery goes back to the time of the founding of the great Hanseatic League in the twelfth century. The arms of Lubeck are three herrings on a gold ground, a sign and emblem of the prodigious wealth that for two or three hundred years the Hanseatic League drew from the Baltic herring. At intervals of about a hundred years or rather more, ever since the twelfth century, the herring fishery has flourished and again dwindled away. A period during which the Baltic fishing dwindled gave the Dutch a great opening, and the Hanseatic power passed away for ever. In spite of many ups and downs this country had never had to experience those great herring famines which had changed the history and brought ruin or alternative prosperity to so many busy ports of Northern Europe. The herring, Professor Thompson concluded, was indeed a very great fish—it was not only the material of a trade, but the material of the wealth of nations.

THE WORK OF NATIONAL SERVICE MEDICAL BOARDS.

VERY good progress has been made in the great task of medical examination of the large number of elder men who were rendered liable to service by the last Military Service Act. The work has had to be done under considerable strain, but the great pressure is now over and the calls that will in future be made upon the National Service medical boards will be much lighter. The work, we can confidently assert, has been extremely well done, and any errors in medical examination have been extremely few. Certain members of Parliament have seized upon any and every opportunity to criticize the work of the boards, but even their keen eyes have been able to detect very few examples of error, and in not a few of the cases about which questions have been asked it has been plain that no error was committed. The fact is that the medical profession has again responded admirably to the country's call, not only in numbers—we believe that there are close upon three thousand members of the National Service medical boards—but also in the careful and conscientious manner in which the very responsible duties of these boards have been carried out.

VACCINES FOR INSURANCE PATIENTS.

THE London Panel Committee has again discussed the question of the supply of autogenous vaccines and has adopted a recommendation that such vaccines should form part of medical benefit, but that the cost should not be borne by the drug fund. The Panel Committee urged upon the Insurance Committee the advisability of including in the list of persons who are in agreement to supply drugs and appliances under the Insurance Acts the names of institutions or persons in a position to supply such vaccines for the use of the insured population.

A MINISTRY OF HEALTH.

THE Ministry of Health Bill, which has been under the consideration of Sir George Cave's Home Cabinet, will not, we imagine, prove to be a measure as comprehensive and revolutionary as recent debates and discussions might lead the public to suppose. In this connexion we may recall the suggestion put forward last January[1] by a group of ten members of Parliament headed by Major Waldorf Astor, now Parliamentary Secretary, Ministry of Food. The group advocated the combination and reorganization of existing departments for the setting up of a Ministry of Health, and submitted the heads of a bill providing that so soon as the new Ministry had been established by Parliament all the powers of the Insurance Commissions for England and Wales, and all the powers of the Local Government Board, should be transferred to it by Order in Council, that the health functions of other departments should be taken over at such times as were found convenient, and that there should be power to transfer from the new Ministry to other departments any functions transferred to it at first for the sake of convenience but found to be unsuitable for a health ministry to perform. Under this scheme the new Ministry would be simultaneously acquiring and shedding powers, and although the method was recognized to be clumsy, the promoters believed that by this expedient matters of national health would be discussed on their merits undisturbed by conflicting claims of rival authorities. Writing on the subject some four months ago, we said that the indications then were in favour of the Government bill being a measure to amalgamate the Insurance Commissions in England and Wales with the Local Government Board, leaving the non-medical functions of the latter department to be shed at a later date. There is general anticipation that the medical functions of the Board of Education would also be handed over, but with this possible addition the present position appears to be the same to-day as it was in March. If the bill is introduced in this form, it will undoubtedly come in for much criticism. If it means that the Ministry of Health, to quote Sir Bertrand Dawson's words, is not to have "a bigger horizon than

[1] BRITISH MEDICAL JOURNAL, January 19th, 1918, p. 98.

the Local Government Board and Insurance Commission, then we must emphatically say 'No.'" On principles, as he said, there can be no compromise—"the practice of putting the skilled under the control of the unskilled must cease." One plan for preventing the perpetuation of this evil in the new Ministry is outlined in the scheme of the British Medical Association, which proposes the establishment of an Advisory Council of experts. This council should hold regular meetings not less often than once a month, should have direct access to the Minister, and should have the power of initiation—that is to say, it should have the right and obligation to tender its advice to the Minister on any subject which it considered ought to be dealt with, and not merely on such matters as the Minister referred to it. It is proposed to meet the objection that the Board's advice could always be overruled by the Minister, acting perhaps under the influence of permanent officials—not experts either in medicine or any of the other professions concerned in the prevention of disease or the maintenance of health—by requiring reports of the Advisory Council to be presented to Parliament. What value this expedient would prove to have in practice is a matter upon which there is room for difference of opinion; but, provided the Minister had efficient permanent medical officials in an independent position of direct responsibility to him, it would undoubtedly afford some safeguard against the risk of "putting the skilled under the control of the unskilled."

A FORTNIGHT ago we mentioned that the Royal College of Surgeons had accepted the invitation of the Royal College of Physicians to appoint a joint committee to consider the proposals for the establishment of a Ministry of Health, and it was added that the committee would probably co-opt representatives of the Society of Medical Officers of Health. We understand that at a recent meeting of the joint committee of the Colleges this intention has been carried out, and that Dr. Hamer, M.O.H. London, Dr. H. R. Kenwood, Chadwick Professor of Hygiene in the University of London, and Dr. Robertson, M.O.H. Birmingham, will join the committee. The representatives of the College of Physicians are the President, Dr. Norman Moore, Sir Bertrand Dawson, Sir J. F. H. Broadbent, and Dr. Ormerod (Registrar). The representatives of the College of Surgeons are the President, Sir George Makins, Sir Berkeley Moynihan, Mr. Waring, and Mr. Ryall.

COLONEL H. M. W. GRAY, C.B., has, by desire of the Director-General, relinquished the post of Consultant Surgeon to the Third Army of the British Expeditionary Force in France, and is now associated with Sir Robert Jones, C.B., Director of Military Orthopaedics, in the conduct of that department. Colonel Gray will not at once resume work as surgeon to the Aberdeen Royal Infirmary, as his new duties will make it necessary for him to reside for the present in London, where are the head quarters of the orthopaedic department.

THE KING has appointed Mr. R. R. Cruise, C.V.O., F.R.C.S., to be surgeon oculist, and Sir Harry Baldwin to be surgeon dentist, to His Majesty.

THE Home Secretary has appointed a departmental committee to inquire into the conditions of service of superintendents, teachers, and other officers of reformatory and industrial schools, and to make representations as to the number and qualifications of the officers required in the several classes of schools and the appropriate scales of remuneration for such officers, and to prepare an estimate of the additional cost to the schools resulting from such recommendations. The chairman is Dr. A. H. Norris, Medical Inspector of Reformatories and Industrial Schools.

Medical Notes in Parliament.

A Ministry of Health.—Sir William Collins, on July 23rd, asked Mr. Bonar Law whether, in view of the conflicting and varied interests involved in the question of a Ministry of Health and the number of Government departments concerned, he would consider the desirability of setting up some form of Government inquiry, by Royal Commission or otherwise, into the desirability and practicability of instituting a Ministry of Health. Mr. Bonar Law replied that the Committee on Home Affairs hoped shortly to settle a satisfactory scheme. The Government still considered that the appointment of a Royal Commission was unnecessary. It will be remembered that on July 10th the Speaker refused leave to move the adjournment of the House to raise a debate on the proposal for a Ministry of Health, but promised to reconsider the matter. On July 19th, in reply to a question by Mr. Booth, who had a blocking motion down, the Speaker said that he could not accept a motion for adjournment (on ground of "urgent public importance") to call attention to the fact that the Government had not introduced a particular bill, because if he did so he would open a door for similar motions upon any particular topic in which any forty members might be interested.

Army Medical Establishments in France.—In answer to Dr. Chapple, Mr. Macpherson, on July 18th, said that the Army Council had now considered the report of the Committee on Medical Establishments in France, and such action as was desirable had been taken.

Medical Officers Prisoners in Turkey.—Colonel Burn asked whether British medical officers, both of the R.A.M.C. and the I.M.S., who were prisoners in Turkey were receiving smaller pay and allowances than when they were on active service in Mesopotamia or elsewhere, although they were still working as doctors; whether the War Office would arrange that they be given the full pay and allowances which they drew on active service on receipt of certificates from them or on other evidence that they had medical charge of prisoners; and whether those of them who drew free rations while on active service would be given an allowance in lieu for the period covered by such certificates or evidence. Mr. Forster replied that British officers, both of the R.A.M.C. and of the I.M.S., are on their release or exchange credited with the full Indian pay of their substantive appointment for any period of their captivity during which they certified that they were fully employed with the care of British or Indian sick and wounded. Ration allowance was issuable only to officers when they were on active service.

Medical Grading.—Sir Auckland Geddes, on July 18th, replying to Mr. Rendall, said that the grades into which the men of the new military age were divided were distinguished from those applicable to their juniors. Tribunals had been informed that men placed in Grade I (B 1) were to be regarded as "not fit to be trained in the first line infantry," and that, in considering the relative military value of men in the new classifications Grade II (B 2) and Grade III (B 3), they must assume that these men were of substantially less military value than men under the previous Military Service Acts who were placed in Grade II or Grade III respectively. The effect might be made clear by example: A man of the old military age in Grade III might be fit only for sedentary work at his trade—for example, shoemaking—whereas a man of 45 in Grade II (B 2) might be perfectly fit for posting to the Labour Corps.

Medical Examination of School Children.—Mr. Munro informed Colonel Collins that schemes for the medical examination of school children had been adopted by the whole of the School Boards in Scotland, and, except in the county of Shetland, had actually been brought into operation. In some districts, however, the work had been temporarily interrupted owing to the depletion of the medical and nursing staffs through the war.

A BOARD of medical officers, which includes among its members Professor Victor C. Vaughan and Colonel William H. Welch, has been appointed by the American Government to make an investigation into the nature, causes, means of prevention, and treatment of pneumonia and its complications in the various military camps of the United States.

THE WAR.

A NAVAL AMBULANCE TRAIN.

IN the account of land medical transport arrangements contributed by Surgeon-General Sir James Porter and Staff Surgeon A. Vavasour Elder, to the BRITISH MEDICAL JOURNAL of April 28th, 1917, and since reprinted in *British Medicine in the War*,[1] a sketch was given of the general organization of this work, and more particularly of the naval ambulance trains which form the most important link in the system. The authors of that article took a very large share in planning and perfecting the arrangements, and their names are by general consent identified with the system.

The first properly equipped ambulance train made its initial run on October 14th, 1914; it afterwards came to be known as Naval Ambulance Train No. 1, and was followed at intervals by Nos. 2, 3, 4, and 5. Early in 1916 Sir James Porter, finding that the machinery had grown to such dimensions that a central office in London was indispensable, took up his post at the Admiralty as principal medical transport officer. Since September, 1917, the work has been carried on by his able successor, Deputy Surgeon-General C. S. Woodwright. The whole system is thus controlled at the centre by the Medical Transport Department at the Admiralty. The two chief local centres of activity are at Edinburgh and at Chatham. Of these, in the nature of things, Edinburgh comes first in importance, and the work there has developed more and more during the course of the war. The medical transport officer for Scotland is Deputy Surgeon-General Stanley Nance, who has been concerned with this particular service from the beginning of the war, and his office is in Edinburgh. At Chatham are kept most of the stores for the trains and ambulances, whilst all those occupied in the trains are borne on the books of the Royal Naval Dépôt (H.M.S. *Pembroke*) at that port; the present medical transport officer is Fleet Surgeon Kenneth H. Jones. There are other subsidiary dépôts at Hull, Plymouth, and Portsmouth, and many assistant medical transport officers are spread about the country from the north of Scotland down to Devonshire. Through the courtesy of the Medical Director-General, Sir William Norman, we have lately journeyed more than a thousand miles on a naval ambulance train, and in this way were able to see the system at work.

It will be remembered that the special feature of the naval sick transport is that a lying-down case is put to bed at once in the standard naval pattern cot and is never moved out of it from the time he is wounded or falls sick in the fighting ship until he finally reaches a base hospital; patient and cot travel together all the way, and the whole transport system has been designed and built up around this central idea. The standard naval cot is in fact one of the few direct links between the days of Nelson and the Grand Fleet of 1918. It consists essentially of a portable canvas bed with bedding, easily loaded and handled, and as easily slung. Hospital ships, motor ambulances, and ambulance trains are all fitted to accommodate the standard cot, and for every "loaded cot" that it receives a medical unit gives up a clean, empty cot in exchange.

Patients from the Grand Fleet and the northern coast hospitals are in ordinary times brought down to Edinburgh by smaller ambulance trains and distributed among the hospitals in the neighbourhood, whence they are evacuated by a full-sized ambulance train which makes a weekly trip to the main naval hospitals in the south of England. The train making this "routine distribution run" usually begins its journey near Edinburgh. Sick and wounded are often landed direct from hospital ships in the Firth of Forth, while at Edinburgh more patients from the naval hospitals join the train by ambulance car. The object of the circular tour of Great Britain is to distribute patients to their respective home ports or dépôts.

The amount and kind of medical attention given during the journey is governed by the principle that the train is "an ambulance and not a hospital." Thus the main purpose in view is to make the patients comfortable and not to give treatment beyond the immediate necessities of each case *en route*; dressings and medical treatment are therefore reduced to a minimum, although means are supplied for dealing with emergencies, including a small dressing station equipped with instruments and drugs, and a simple form of operating table.

The train on which we travelled is the latest member of the group of large trains; it was built for the Admiralty by the London and North-Western Railway Company. The engines are supplied by the various railway systems over which the train travels, the movements being arranged between the naval medical transport officers and the railway executive. The train consists of twelve coaches, arranged in the following order: baggage coach; staff coach, with quarters for medical officers and nursing sisters; officer patients' day coach, with cooking galley and pantry; officers' cot coach; three men's cot coaches; administration coach, containing main cooking galley, stores, and office; men's day coach; two men's cot coaches; and lastly the crew's coach, with separate quarters for petty officers. At the far end of the first and last coaches there is a brake compartment for the guard, with an electric signalling device for communication between the driver and guard in whichever direction the train is travelling, while the main parts of the train are linked together by telephone. The internal arrangements of the train were set out very clearly in the article by Sir James Porter and Staff Surgeon Elder, and we can vouch for the comfort and completeness of the equipment therein described, as well as for the sailorlike precision with which all is done. The essence of the medical transport service is expedition; its motto is speed without confusion, haste without hitches. These conditions can only be fulfilled by careful preparation and constant practice.

The medical staff of the ambulance train consists of a surgeon-in-charge and another medical officer; nursing sisters are only carried in exceptional circumstances. The right-hand man of the surgeon-in-charge is the sick berth steward—an experienced petty officer of the regular sick berth staff. The remainder of the crew, thirty-six in number, are drawn from the auxiliary sick berth reserve. One petty officer acts as baggage master, another checks the cases, and a third, with special railway experience, is concerned with the running of the train, and acts as a link between the railroad authorities and the surgeon-in-charge. The personnel also includes a chef and two cook's mates, and a writer for clerical duties. Alternate four-hour watches are kept by day and night, the crew being divided for this purpose into port and starboard watches as afloat. The patients and their baggage are grouped according to their various destinations. Telephone and telegraph are always employed to advise the medical transport officer to whose district the naval ambulance train is proceeding to let him know the approximate time of arrival and number of cot and sitting patients, so that he can arrange requisite ambulances to meet them.

When carrying patients the cots are hung in two tiers by chains from the carriage roof, lateral jolts being absorbed by elastic pads and the Elder spring clip. Metal bed frames are also carried for use in special cases; they can be slung like cots, and wooden slats ("cot spreaders") are available for fracture patients. The victualling of the train is mainly done from the dépôt at Chatham, but perishable stores may be bought locally as required. The food is abundant and well cooked, and emergency rations are carried for patients and crew to avoid any risk of shortage. The galleys hold in compact form everything needed for gas cookery, and there is ample water storage. The full cot capacity of the train is 136, including 24 cots for officers; this total can be increased in an emergency. Sitting accommodation is provided in the daytime for non-cot cases by an ingenious method of converting cots into sofas by stacking them along the sides of the ward coaches. Thus during a daylight journey the maximum accommodation would be 98 cots and 162 sitting cases. The men's day coach serves as a messroom, and, when required, as an ablution coach. One coach is set aside for sitting patients with venereal disease, and their bedding and utensils are kept apart and disinfected at the dépôt.

On arrival at Chatham every train discharges its soiled cots and is completely fitted out with clean cots ready for the next run. Besides a large number of equipped cots, stores of blankets, mattresses, and other bedding are kept at Chatham, for use if occasion arises, while in the trains extra blankets and other bedding are kept for use at the discretion of the train surgeons.

[1] *British Medicine in the War*. With coloured plates and numerous illustrations in the text. London: The British Medical Association. (Pp. x + 138. 2s. 6d.)

CASUALTIES IN THE MEDICAL SERVICES.

ROYAL NAVY.

Wounded.

Surgeon Probationer H. S. Savage, R.N.V.R.

ARMY.

Killed in Action.

CAPTAIN E. P. W. WEDD, M.C., R.A.M.C.

Captain Edward Parker Wellman Wedd, M.C., R.A.M.C., was killed in action instantaneously on July 13th, aged 34. He was the elder son of Mr. E. A. Wedd, J.P., of Great Wakering, Essex, and was educated at Cheltenham College, where he was stroke of the college boat in 1901; at Caius College, Cambridge, where he gained his blue, rowing against Oxford in 1905, and graduated B.A. in 1906; and at St. Bartholomew's Hospital. He took the diplomas of M.R.C.S. and L.R.C.P.Lond. in 1911, and afterwards acted as house-surgeon to the West London Hospital. For some years before the war he had held a commission in the Yeomanry, and in that capacity went to the front in November, 1914, and had served there ever since. After serving on the staff for some time he took a temporary commission in the R.A.M.C. in 1917, and received the Military Cross last April.

Died of Wounds.

CAPTAIN P. M. MACLACHLAN, R.A.M.C.

Captain P. M. MacLachlan, R.A.M.C., was reported as having died of wounds, in the casualty list published on July 18th.

Died on Service.

CAPTAIN F. METCALFE, R.A.M.C.

Captain Frank Metcalfe, of Newcastle-upon-Tyne, died in the Framlington House Hospital for Officers on July 10th, aged 26. He graduated M.S., B.S. Durh. in 1914, and joined, in August, 1914, the 1st Northumberland Field Ambulance. He went to France with his unit in April, 1915, and did much arduous work there. He was invalided home in September, 1916, with myelogenous leukaemia, but, under treatment in the 1st Northern General Hospital, he made a seemingly marvellous recovery. He was posted to Catterick in April, 1917, and, at his own request, went to France in August. He came through the March retreat, but his health then broke down completely.

Wounded.

Captain J. M. Forsyth, M.C., R.A.M.C.

Prisoners of War.

Captain A. C. Hepburn, R.A.M.C.
Captain W. J. Hirst, R.A.M.C.
Lieutenant A. S. Findlay, R.A.M.C. (temporary).

DEATHS OF SONS OF MEDICAL MEN.

Moxon, Jack, Corporal Australian Imperial Forces, youngest son of the late Dr. William Moxon of Matlock, died in hospital abroad on July 2nd, aged 22.

Pearson, William Reginald Guy, Captain R.A.F., who lost his life on June 20th, aged 21, through a collision in the air, was the second son of Dr. Spencer Pearson of Clapham Road, S.W., and was educated at Ashdown Park and Berkhamsted. At the outbreak of war he enlisted in the Empire Battalion Royal Fusiliers, and, receiving a commission in the A.S.C., proceeded to France in January, 1915. He soon afterwards joined the R.F.C. and acted as an artillery observer. Returning to England, he completed his training as a scout pilot, and served in France in a fighting squadron for nearly a year, during which time he had over fifty encounters with enemy machines, and was officially credited with having brought down eleven German aeroplanes. He became a flight commander and gained his captaincy, being mentioned in dispatches.

[We shall be indebted to relatives of those who are killed in action or die in the war for information which will enable us to make these notes as complete and accurate as possible.]

HONOURS.

THE following medical officers have been decorated for services in the operations against Zeebrugge and Ostend on the night of April 22nd-23rd, 1918.

D.S.O.

Surgeon Frank Pearce Pocock, M.C., R.N., *Iris II.*

By his devotion to duty he undoubtedly saved many lives. When *Iris II* was hit he at once commenced tending the wounded, and as all the sick-berth staff were killed, had all the work to do alone. After the dynamo was damaged he had to work by candle and torchlight.

Distinguished Service Cross.

Surgeon William Little Clegg, R.N., *Vindictive.*

Was in charge of the stretcher parties on the upper deck of *Vindictive*. Landed on the mole to recover casualties. Later, when he was proceeding with his party along the forward mess deck of *Vindictive*, a shell entered and burst close to him, killing one of his stretcher-bearers. He continued his work immediately, and by his personal example kept his stretcher parties going.

The following statements of services of the medical officers specially promoted in connexion with the same expedition have been issued:

Staff Surgeon James McCutcheon, R.N., *Vindictive* (promoted to Fleet Surgeon).

Was the senior medical officer of the force. It would be difficult to exaggerate the splendid qualities displayed by this officer. He organized the medical arrangements excellently, and imbued his subordinates with a fine spirit, and by his own personal skill and attention contributed to the saving of the lives of many gallant officers and men.

Surgeon Henry St. C. Colson, R.N. (promoted to Staff Surgeon).

Was attached to the R.M. storming party. He worked for many hours under the greatest disadvantages in gas fumes and by the light of a torch only with the utmost devotion to duty.

A Supplement to the *London Gazette* of July 18th contains the following statements of the acts of "conspicuous gallantry and devotion to duty" for which the awards announced in our issue of February 23rd, 1918, were conferred.

Second Bar to the Military Cross.

Temporary Captain Archibald Fullerton, M.C., R.A.M.C.

He worked untiringly under heavy shell and machine-gun fire, attending to the wounded of his own and other units. His fearless conduct undoubtedly saved many lives.

Bar to the Military Cross.

Captain William Fotheringham, M.C., R.A.M.C.(S.R.).

He attended to the wounded in an exposed position under heavy hostile gas shell fire. Though suffering badly from gas he continued at work with the greatest courage and determination until he was blinded by gas.

Temporary Captain William John Knight, M.C., R.A.M.C.

He worked continuously during an engagement attending to the wounded under heavy fire, and later went into a village which was being heavily shelled and brought away several wounded men. He went back to the front line after the position had been evacuated and brought back several badly wounded men. He worked with untiring energy throughout the operations, and saved many lives.

Captain Frederick William Lees, M.C., C.A.M.C.

He worked untiringly attending to the wounded and superintending their evacuation. Though his aid post was continually under heavy shell fire he carried on his work with an energy and cheerfulness which were a splendid example to all. He saved many lives by his devotion to duty.

Captain Thomas Ainsworth Townsend, M.C., R.A.M.C.

Although twice wounded he refused to have his wound attended to, and continued to dress the wounded under a continuous and heavy concentration of high-explosive and gas shells. Not only did he attend the wounded and gassed of his own unit, but rendered aid, under conditions of great difficulty, to wounded of neighbouring battalions, whose medical officers had become casualties. His complete disregard of personal danger and splendid devotion were a magnificent example to all.

Military Cross.

Temporary Captain Eric Phillip Blashki, R.A.M.C.

He went forward during an engagement and established a dressing station in an advanced position. He remained at his post under heavy shelling and collected the wounded from an area swept by machine-gun fire. He showed the greatest courage and resource.

Captain Frank Chadwick, M.B., R.A.M.C.

After the troops had been withdrawn he remained with the wounded all night in an advanced position, and organized their removal in the face of great difficulties. By his courage and determination he succeeded in getting all the wounded away.

Temporary Captain Thomas Maitland Crawford, R.A.M.C.

He was wounded and rendered temporarily unconscious by a shell which mortally wounded the colonel and adjutant of his battalion. As soon as he recovered he attended to their wounds, and remained on the spot without having his own wounds dressed until stretcher-bearers arrived. He reported to brigade head quarters before having his wounds attended to, and showed splendid courage and self-sacrifice.

Temporary Captain William Claughton Douglas, R.A.M.C.

While returning from the regimental aid posts he came under a heavy barrage, and was slightly wounded. Seeing that some men further back had been wounded, he at once went to their assistance, got them under the only available cover, attended to their wounds, and organized stretcher parties for their removal. His prompt and gallant action saved the lives of two seriously wounded men.

Temporary Lieutenant Frederick Barnes Elwood, R.A.M.C.

He worked with the greatest coolness and energy throughout two days' operations, attending to the wounded in his aid post close to the firing line. Later, he went out with his stretcher-bearers, and brought back many wounded who were lying out in "No Man's Land."

Captain Archibald McLaren Ferrie, R.A.M.C.(S.R.).

He continually exposed himself to heavy fire in attending to the wounded during an attack. Later, when an officer was wounded and was lying out in an exposed position, he crawled out and brought him in over ground swept by the enemy's fire. His gallantry and courage undoubtedly saved many lives.

Captain George May Foster, C.A.M.C.

He was in charge of the evacuation of the wounded from the front line during the operations, and set a splendid example to his stretcher-bearers by his courage and determination. He led a party to remove several stretcher cases under heavy shell fire, and, though wounded himself, he attended to their wounds and arranged their removal.

Temporary Captain James Huntly Legge, R.A.M.C.

In the course of an enemy counter-attack, which almost succeeded in penetrating to his aid post, he, with the greatest coolness and courage, continued his work of clearing the wounded, not only of his own battalion, but of other units. Throughout, the hostile fire was intense, and it was due to his untiring efforts that so many wounded were quickly and efficiently evacuated.

Captain Reginald Devereux Moore, R.A.M.C.

He worked continuously for eight days attending to the wounded at an advanced dressing station, often under shell fire. His organization of the work was excellent, and by his courage and cheerfulness he inspired all ranks with confidence, which assisted them materially in the performance of their duties.

Captain John Gilbert Morgan, R.A.M.C.

When the advanced dressing station had been ordered to withdraw he went forward with a party of bearers and successfully cleared a number of wounded from the regimental aid posts. The operation was carried out under continuous shell and machine-gun fire.

Captain Alfred Stannage Porter, C.A.M.C.

He dressed many wounded during the operations, working in the open under intense fire, and set a splendid example of courage and self-sacrifice.

Temporary Captain John Oscar Thomas, R.A.M.C.

He dressed a wounded officer and man under heavy fire and got them to a place of safety. He showed great coolness and courage.

Temporary Captain Philip Hewer Wells, R.A.M.C.

He attended to the wounded of several units who were lying out in an exposed position under fire. He worked throughout the night, often under an intense bombardment of gas and H.E. shells, and by his courage and self-sacrifice saved many lives.

Temporary Captain Ernest William Gilmore Young, R.A.M.C.

He collected and dressed the wounded in an exposed position under heavy fire and remained on the spot after the withdrawal of the regiment until all the wounded had been brought in.

Captain Gavin Young, R.A.M.C.(S.R.).

While attending to the wounded under heavy machine-gun fire he worked up to the leading wave and searched the whole ground for wounded under continuous fire, and, owing to his exertions, all the wounded were evacuated with great rapidity. Later he showed great courage and devotion to duty in rescuing wounded from destroyed dug-outs under shell fire.

4th Class Assistant Surgeon James Garnett Goodman, I.S.M.D.

He remained tending the wounded under heavy fire until every case had been evacuated, after which he followed the battery into action. On the previous day, seeing the battery come under an intense shell fire, he at once went up to the guns to render assistance. His coolness, initiative, and keenness were most marked.

Scotland.

THE SCOTTISH UNIVERSITY CONSTITUENCY.

UNDER the new franchise Act the four Scottish universities form a single constituency with the right to return three members. Hitherto the Scottish universities have formed two constituencies—Edinburgh and St. Andrews, the present representative being Sir Watson Cheyne, and Glasgow and Aberdeen, the present representative being the Right Hon. Sir Henry Craik. A man is entitled to be registered as a parliamentary elector for the Scottish University constituency if he is of full age, and not subject to any legal incapacity, and is qualified under Section 27 of the Representation of the People (Scotland) Act, 1868. A woman is entitled to be registered if she has attained the age of 30 years, and would be entitled to be registered if she were a man. So far no very active steps seem to have been taken in Scotland in anticipation of the general election, which it is believed will take place in January next, if not in November, but it is considered probable that Sir Watson Cheyne and Sir Henry Craik will be nominated again, and that for the third seat there may be several independent candidates. This seems to be indicated by two recent events: one is an advertisement calling "a meeting of members of the Scottish University Councils favourable to a candidature in support of the programme of the new Labour Party" on July 11th; the result, so far as we are aware, has not been made public. The second event is an announcement that Sir John Collie "has been invited to become a Liberal candidate for the Scottish Universities." Other names also have been mentioned. Apparently, however, nothing is yet settled, but in view of the fact that it is now again thought probable that a general election may take place as early as next November or December, we anticipate that an announcement will shortly be made. We are informed that the approaching election was briefly discussed at the annual meeting of the Edinburgh Branch, but that no decision was then taken.

ADMISSION TO SCOTTISH UNIVERSITIES.

An ordinance, dated July 17th, of the University Courts of St. Andrews, Glasgow, Aberdeen, and Edinburgh, relating to admission for the purposes of graduation, has been issued. A Scottish Universities Entrance Board will be constituted consisting of sixteen members, four appointed by each University Court, and of these members two at least must be professors or lecturers. Each member will hold office for four years except that of the four first elected by each University Court one will hold office for one year, one for two years, one for three years, and one for four years. The duties of the Entrance Board will be as follows:

1. In the case of schools in Scotland which regularly present candidates for the group certificates of the Scottish Education Department, to determine as to the length and general character of the courses of secondary education, the satisfactory completion of which may be deemed suitable by the universities as entitling applicants for admission thereto.
2. In the case of other schools in Scotland, to determine whether their curriculum of secondary education is of such a character as may be deemed suitable by the universities as entitling applicants for admission thereto.
3. To determine what leaving or other certificates shall be accepted by the Board.
4. To determine all questions relating to the tests of fitness for admission to the universities.

The Board will have power to consult with the Scottish Education Department and other authorities, to make representations to the University Courts, to appoint special committees of advice, and to deal with complaints or appeals from applicants for admission.

England and Wales.

NATIONAL SERVICE MEETING.

ON the invitation of Sir Charles Bedford, the Commissioner of Medical Services for the London region, a gathering of the chairmen and members serving on the London Recruiting Boards, to the number of about 200, took place in the Caxton Hall, Westminster, on July 23rd, to meet the Chief Commissioner, Sir James Galloway, K.B.E., C.B., who was accompanied by Sir John Collie, of the Ministry of Pensions.

Sir Charles Bedford made a few introductory remarks, in which he mentioned that the boards in the London region had had to be increased from 20 in March last, when he took charge, to 54 to-day. He offered his personal thanks for the good work done, especially during the two recent special recruiting efforts. The very onerous work had been successfully accomplished.

Sir James Galloway, who was in the chair, explained that he had now so many calls upon his time that it was not possible for him to go round personally and visit the boards as at one time he did; he therefore welcomed the opportunity of meeting the members in a body, and offering them not only his own thanks, but also, as he was empowered to do, the thanks of the Ministry for the whole-hearted manner in which they had carried out their very arduous and difficult duties. They had undoubtedly done excellent work, but he did not wish them to remain satisfied. As the result of the experience they had all had, whether on the administrative or executive side, they must realize that perfection had not yet been attained and that all their efforts should be put forth to improve their organization and the quality of their work. They were about to enter a comparatively quieter time after the first week of August, and he invited the members to discuss matters among themselves and with their chairmen, and put forward any suggestions that might help towards improvement. The work, much of which was pioneer work, was interesting. The members of the boards were for the most part private practitioners who in the past had to deal only with the sick and diseased, and therefore had not had the opportunity of knowing what the normal condition of health was in reference to climate, nature of work, crowded surroundings, and other conditions of life. Conscription had given the profession the first real opportunity of studying these questions and of gathering information, and it was of the utmost importance that advantage should be taken of it to the full, with a view to the improvement in the general health of the people by legislation or otherwise.

Sir John Collie, who also spoke, laid emphasis on the direct bearing which efficient medical examination and grading of recruits had upon the pensions responsibilities of the country.

CEPHALITIS, MYELITIS, AND INFLUENZA.

The annual report of the Medical Officer of Health for London, Dr. W. H. Hamer, for the year 1917 has been issued. It states that the prevalence of notifiable infectious diseases was, generally speaking, remarkably low, the only exceptions being diphtheria and cerebro-spinal fever, each of which, however, showed a slight decline upon the incidence in the previous year. Towards the end of 1917 and early in 1918, there was a new development having special interest in connexion with observations made in London during the last four years with regard to influenza and cerebro-spinal fever. In 1914, 1915, and 1916 statistical evidence was obtained to the effect that epidemics of these two diseases occur concurrently, and also in a certain sequence to one another, and reference was made to the epidemic relation between poliomyelitis, cerebro-spinal fever, and influenza. At the end of 1917 a distinct change of type was manifested, cases of illness with pulmonary, intestinal, or cerebral symptoms being prevalent, and it became apparent that a special epidemic influence was at work. Reference is made to the views of M. Netter, to which we recently called attention (June 15th, p. 677), and to his observation that a like prevalence of similar cases had been noted following upon the pandemic influenza of 1889–90. Polioencephalitis occurred during the spring of 1918 in epidemic form in Germany and South Africa, and soon afterwards came the news of the severe influenza epidemic in Spain. In discussing the phenomena of the epidemic constitution of 1917–18, Dr. Hamer points out "that just as encephalitis, febrile cerebritis, influenza, and sweats prevailed in Europe 400 years ago and have periodically done so since that time, so, history repeating itself, they have again recently spread widely in the old and new worlds." The events of the past few months once more strikingly illustrate the unexpected manifestations and protean behaviour of "influenza"; and "incidentally the close connexion between polioencephalitis, poliomyelitis, cerebro-spinal meningitis, and influenza now seems to be established." Dr. Hamer goes on to express the hope that recent events may "place a limit upon the too exacting claims of causal organisms, and lead to some exercise of the recognized principle known as the law of parsimony in considering additions to the list of new diseases. The want of such recognition during the past four years has made the work of administration difficult, and during the past few months there has been quite an outbreak of ephemeral new diseases, which, on inquiry, have turned out to be the old foes, with faces new only to those not versed in the history of epidemics." The type of disease now manifested in various parts of London is held to be similar to that observed in the pandemic of 1889–90.

TREATMENT OF TUBERCULOUS PERSONS.

A scheme for the treatment of tuberculous insured and uninsured persons in London, propounded by the London County Council after consultation with the Metropolitan Asylums Board, has recently been the subject of debate by the London Insurance Committee. The Council's scheme was for the provision of beds in hospitals and sanatoriums, a certain proportion of which would be available for insured persons recommended by the Insurance Committee. The Council also proposed to appoint a tuberculosis officer, by whose advice the committee should be guided, and to arrange for doubtful and difficult cases to be referred to a consumption hospital. The Council undertook to make up the financial deficiency subject to the condition that one-half should be repaid by the Local Government Board. It expected to secure at an early date about 200 additional beds and had inserted £20,000 for this purpose in the estimates for the current year. The Insurance Committee decided to refer the whole correspondence to the President of the Local Government Board and the Chairman of the Insurance Joint Committee, to frame a scheme which should secure a definite standard of accommodation for insured persons, expert medical advice, and the establishment of a joint advisory committee to decide the minimum number of beds to be made available for insured persons to ensure that they shall not have to resort to Poor Law institutions.

THE late Dr. William C. Goodell left £10,000 to the University of Pennsylvania to be applied to the endowment of a chair of gynaecology.

Correspondence.

THE FUTURE OF THE MEDICAL PROFESSION.

SIR,—Sir Bertrand Dawson, in his very able and comprehensive Cavendish Lecture, stated with great truth that the general practitioner "should concern himself with measures for the maintenance of health as well as the curing of disease; he must be brought into the position of a rightful leader and skilled adviser in all that appertains to the social service and welfare of his district. In matters of health he should be the father of his people." These words are full of wisdom and common sense, and I sincerely hope they will not fall on deaf ears. In my opinion, no better manner of bringing this most desirable state of things about can be found than by medical men going upon their own borough councils, and paying particular attention to the health needs of their own neighbourhoods.

I have been a member of this borough council for many years, and have had the honour of acting as chairman and deputy chairman of its Public Health Committee. At my suggestion the council most willingly appointed a Medical Subcommittee to consider and report upon all medical matters, such as the management and care of cases of tuberculosis, questions relating to milk supply, health visitors, housing problems, and so forth; and for some time past we have had an influential council and general committee, under the chairmanship of Lord Phillimore (deputy chairman, myself), to deal with the all-important problems of maternity and child welfare.

But, alas! in Kensington, a lady doctor (Dr. Ethel Bentham) and myself alone are found, my medical friends say, silly enough to waste time and energy on such a body as a borough council. I do not think we are silly or waste our time. Rather, we widen our knowledge of our fellow citizens, not to our moral and social disadvantage, and I know the council is greatly obliged to us for the help we have been able to afford it in pressing affairs concerning the health of the borough. Further, I hope we have been able to initiate a certain amount of preventive and other health work. Medical men are too apt to say they have not the time for such public duty. My experience is that not infrequently it is the really busy man who does take it up; and, in the long run, his own health also is the better maintained, on the principle of the old saying, "a change is as good as a rest." If only more medical men will interest themselves in municipal work, Sir Bertrand Dawson's fine ideals as regards the future of our profession will, at any rate in no inconsiderable degree, be solved.—I am, etc.,

A. J. RICE-OXLEY, M.D., M.R.C.P., J.P.

London, W., July 15th.

SIR,—I trust Sir Bertrand Dawson's address will receive from members of the medical profession and from hospital boards, public health authorities, and, last but not least, politicians, the earnest attention which it deserves. That there is some hope of this is seen in the fact that already a leading article in the *Times* has been devoted to it. As Sir Bertrand Dawson truly says, owing to the advance of medical science and the increased need of special knowledge, the best work is only to be obtained by "co-ordinated effort installed in special institutions." I regard the latter qualification as important as the former, and my purpose in writing is to enlarge upon one part of his scheme, which as a surgeon I have long had at heart.

In surgery, if the best work alone is to be done, I think that we may lay it down as an axiom that no operation of any magnitude should be performed except in a properly equipped hospital theatre. The surgeon has there skilled assistance with knowledge of his methods and requirements. In my experience a given operation can be performed in the theatre in less than half the time required at a private house or even at a nursing home, and with a minimum of fatigue. Any unforeseen demand for special apparatus can be immediately satisfied. Rigid asepsis can be maintained with ease. This fact has been grasped in nearly every country except our own, notably in America. Yet, as things are here, paupers alone obtain this benefit. The well-to-do have to be content with work performed under great disadvantage in their own houses or in more

or less (certainly less as compared with hospitals) efficient nursing homes. The position of those of moderate means is even worse. They have to put up with the same unfavourable conditions, and in addition have to pay more than they can well afford—or as an alternative submit to free treatment in an ordinary hospital, with the result that a purely charitable institution is abused.

The remedy, I submit, lies in the provision of paying wards at hospitals. Sir Bertrand Dawson refers to this in his scheme. He says, "No doubt paying wards would grow up in proximity to the public-provided hospitals," and, again, "Without doubt private hospital wards should be established by co-operation or otherwise." The fees charged in these paying wards would be on a sliding scale according to the accommodation (open ward, cubicle, or private room), and would be arranged to meet the cases of all those with an income above a certain limit to be fixed. Thus, at one sweep, a large part of present hospital abuse would be removed, and provision would be made for all, rich and poor alike, to obtain operative treatment under the best auspices.

In conclusion, let me write down in tabular form how the various parties concerned would be affected by the proposal:

The patient would obtain operative treatment done as it should be with a minimum of risk to himself. (How many medical men would consent to have their own abdomens opened except in a proper theatre?)

The hospitals would make money on the higher priced beds. They would make money indirectly on the lower, for most of the patients who occupied them would under the present régime pay nothing at all.

The surgeon would be able to do himself justice, and would be saved an immensity of anxiety and fatigue. He would, moreover, obtain some remuneration for operation on certain patients who have hitherto been treated gratuitously.

—I am, etc.,

Reading, July 16th. W. BERNARD SECRETAN.

SIR,—You publish in your issue of July 20th two letters couched in almost identical terms, appealing for consideration of the vested interests of the general practitioner. From their tone it is evident that the authors recognize the inevitability of further interference by the State in general practice; and with this in view, it is their hope that the British Medical Association will succeed in defending the practitioner from the manifold and great dangers which beset him. Dr. Matthews, however, betrays anxiety as to the effectiveness of the British Medical Association as a shield and buckler, and though he abominates the "methods" of the Panel Medico-Political Union, he thinks the former needs gingering up with some of the "fighting material" of the latter. Now, it is here that I desire to join issue with him. I also am a loyal member of the British Medical Association, and it is my earnest desire to see it continue to flourish as the chief scientific body, binding together all ranks and sections of the medical profession into one coherent whole. But I am also a member of the council of the Panel Medico-Political Union, and in that capacity I ask Dr. Matthews to explain how he reconciles his abomination of our methods with his admiration of our fighting material. It is not in fighting material that the Panel Medico-Political Union excels the British Medical Association as a medico-political organization. Let us be frank; it is simply and solely because the Panel Medico-Political Union is a medical trade union, whereas the British Medical Association is debarred by its own Articles of Association from either becoming a trade union or taking action like a trade union. So long as this disability exists (and not only does it appear extremely unlikely to be removed, but probably a majority of the members of the British Medical Association, of whom I should certainly be one, would stoutly resist any attempt to remove it), so long is the British Medical Association incapable of making use of the one weapon wherewith the medical profession can be adequately protected against shameless exploitation by other more efficiently organized interests in the State.—I am, etc.,

York, July 20th. J. C. LYTH.

SIR,—I returned a month ago from many years' practice abroad. Circumstances compelled me to seek a living at once. I found that the position for a man who has no practice but has good health and is under 56 is as follows: He cannot enter private practice lest he be "called up" and lose his investment; if "called up," he is not offered a living wage; if he seeks a war job, a living wage is again denied him. If this position is the unavoidable result of the war, no more is to be said. Such men must send their children to the board school, tighten the family belt, and accept a fall in the social scale. But is it? Is it not the result of the division in our profession, which forced our leaders in spite of the rising cost of living, to pledge us all by contract at the value of the newly qualified unmarried and inexperienced?

I am told our divisions are hopeless, our leaders untrustworthy, our representatives in Government too self-interested. I do not believe a word of it. I believe only what I see—the apathy of the rank and file—and I appeal to them. The past month has satisfied me that we have strong men in high places, some of them so-called "discoveries" of the war; we have strong men at the head of our various organizations, all keenly zealous for our professional well-being. If we have grievances against any man or any organization (I hold a brief for none) let us get together, "the past forgot." It is our business to support, not to snarl; to stimulate.

Let us put forward this plain issue: Are the wages offered us by the public services reasonable in these days and adequate to our experience, expenses, and responsibilities? And if it is agreed that they are not, let us hold until they are—for it is now or never.—I am, etc.,

July 14th. MEDICO.

MEDICAL CERTIFICATES AND TRIBUNALS.

SIR,—Medical certificates are, or ought to be, given with a single eye to the national interests, whilst safeguarding the humblest citizen against avoidable injustice. I think that, as a rule, we should refuse to examine strangers and give certificates when such a proceeding just anticipates and is intended to influence, the work of men who are presumed to be both skilled and impartial.

In the case of old or recent patients I consider our duty to them and the State is best performed by giving without embroidery important facts, in regard to personal and family history, within our own knowledge. The more we assume the rôle of straightforward, impartial witnesses rather than advocates, the better.

Personally, I refuse fees, and I hand any certificate to the individual in a sealed envelope, addressed to the tribunal whose difficult task it is to adjudicate between him and the State.—I am, etc.,

London, N.W., July 17th. J. SCOTT BATTAMS.

STERILIZATION OF THE SKIN BY ANILINE DYES.

SIR,—With reference to the paper published in the BRITISH MEDICAL JOURNAL on May 18th, by Mr. Victor Bonney and Dr. Browning, it may be of interest to record that we also have found certain aniline dyes to be of great value in the sterilization of skin.

Three years ago we published in the *Lancet* a paper upon the use of a compound of malachite green and mercury as an antiseptic (July 24th, 1915), while a further note was added by one of us (G. L. C.) in the *Medical Annual* of 1915. The compound has since been used exclusively for the sterilization of skin with uniform and complete success.

Similar results have also been obtained by several colleagues in the navy, where it is still constantly used, and in order to make it more generally available we arranged with Messrs. Burroughs, Wellcome and Co. a year ago to put it up as "tabloids." It is now available.—We are, etc.,

G. LENTHAL CHEATLE,
Temporary Surgeon-General, R.N.

P. FILDES,
Staff Surgeon, R.N.V.R.

London, W., July 19th.

THE SIGNIFICANCE OF CARDIAC MURMURS.

SIR,—The primary requisites for an estimate of the clinical significance of cardiac murmurs are a better knowledge than we yet possess of their varied modes of production, and more reliable differential tests for their varieties. Those essential aspects have not received much attention in the recent literature concerning the medical

examination of recruits. One of its striking features has been the absence of any reference to the exocardial murmurs, whether functional when due to pressure from the stethoscope or any other pressure, or organic when due to permanent pericardial changes.

But this brief note of inquiry is exclusively concerned with another blank—the absence of any mention of the pseudo-murmur due to first sound reduplication, which is probably the most common form of non-organic systolic murmur coming under official examination. Long before the war I had described it colloquially as "the examinee's murmur," because apt to be induced by the excitement of any examination, whether medical or scholastic; but that name is not a good one. The reduplication might have been there before; examination is only one of the circumstances which can intensify it into audibility as a pseudo-murmur. The mode of production of the latter must be familiar to many clinicians. The simple question I venture to ask is, whether it is so familiar to all that the frequency of its occurrence has been taken for granted and passed *sub silentio*. My doubts as to that interpretation arise from the difficulty I still experience in detecting in some of the less manifest instances the fallacy of the impression produced by the reduplication (more correctly described as an "overlapping asynchronism") of the right and left physiological first sounds. In those doubtful cases my examination has to include a careful application of the respiratory tests, of the postural tests, of the exertional tests, and invariably, too, of naked ear auscultation. Stethoscopes—some more than others—rather tend to blend the sounds into a murmur (or sometimes to suppress the second element in the reduplication); the naked ear differentiates them. With that caution, if only we bear in mind the great frequency of occurrence of the pseudo-murmur, there will be little risk in the majority of cases of overlooking the asynchronism when present. This would relieve examiners of a good deal of perplexity, although not of the whole burden of their responsibility. After all, these are not normal hearts, and much less so are those with a genuine murmur, whether functional or organic.

The growing tendency not to overestimate the clinical significance of murmurs has given us, as so well pointed out in Dr. Claude Wilson's instructive address,[1] the welcome conception of the curability of minor cardiac affections by a systematic régime of graduated exercises; but it has its risks. The graver risk with which we are now threatened is their underestimation for want of a complete knowledge of their causal mechanisms.—I am, etc.,

London, W., June 28th. WILLIAM EWART.

THE VALUE OF TUBERCULIN IN PULMONARY TUBERCULOSIS.

SIR,—I agree with Dr. Lindsay that it is desirable to adopt some uniform method of treatment with tuberculin. The variety of tuberculins used and the variety of opinions held by experts as to the best method of treatment have led to much confusion of thought on this subject, and have been instrumental in delaying the adoption of any uniform system of administration of what may be either a very injurious or a very beneficial agent. I entered a plea some years ago for a uniform method of treatment with tuberculin. After an experience of over fifteen years with tuberculin in both sanatorium and dispensary practice, I have come down to certain bedrock principles which have proved safe guides in treatment. These are:

1. Human tuberculosis should be treated with tuberculin of human origin.

2. Tuberculin should not be given when there is evidence of toxic output and auto-inoculation; one does not treat opium poisoning with injections of morphine.

3. Tolerance to exotoxin should in the first place be established by a course of treatment with T.O.A.

4. When such tolerance has been established a focal immunizing response should be aimed at by the use of tuberculin containing both exotoxin and endotoxin—for example, T.O.A. + B.E., equal parts.

5. Inoculations should be given once every seven days, the commencing dose usually 0.00001 c.cm., the maximum dose not to exceed 0.1 c.cm.

6. The dose should be steadily increased, but no marked general or focal reaction should be induced.

7. The maximum dose should be repeated at increasing intervals.

8. In reactive cases tuberculin will do positive harm; in certain cases of localized pulmonary tuberculosis of smouldering and quiescent type, in obstinate sinuses and in certain skin lesions, tuberculin will do positive good.

—I am, etc.,

Hertford, July 11th. H. HYSLOP THOMSON.

[1] BRITISH MEDICAL JOURNAL, June 22nd.

THE BEGGAR CRIPPLE.

SIR,—The public has too often confused the idea of a cripple with that of a beggar. The resulting reaction has done a great injury to the cause of the self-respecting disabled man in regarding him as a subject for charity, but not for trade-training and employment.

To be sure there is historical precedent for this attitude, for in past decades and centuries various peoples have condemned the cripple to the status of roadside beggar, or at best employed him as jester or Court fool. And in our experience there is justification in the view, because we have seen many cripples at street corners, making public exhibition of their deformity or amputation, and soliciting alms of the passers-by. The number of these beggars is small in comparison to the great body of physically handicapped men who are usefully employed, but the few have vigorously advertised, have made a considerable impression on the susceptibilities of the community, and have reaped a profitable harvest.

That the beggar cripple has been permitted to ply his trade is a great injustice to the disabled men of character and independence. The practice should have been stopped in the past; it is absolutely necessary that it be prohibited in the future. For with the expectation of our soldiers who will return disabled from the front, the public should have no excuse for associating their prospective career with that of the mendicant. On the contrary, every influence should be brought to bear upon the public to show that physical disability is an obstacle, but easily superable with character and ambition; and that the cripple may be made into a useful and productive citizen.

In several cities there have been inaugurated campaigns to drive the crippled beggar from the streets, and give him the alternative of productive employment or a stay in gaol. Such efforts should be imitated in every community and persevered in until the unfortunate conception of the cripple shall exist no more.

Such activity may well be undertaken as a first step in preparation for the return of our disabled soldiers and sailors.—I am, etc.,

DOUGLAS C. MCMURTRIE,
Director, Red Cross Institute for Crippled and Disabled Men.

New York City, June 25th.

THE BURDEN OF COSTLY REMEDIES.

SIR,—The case of Dr. Fisher suggests several thoughts:

1. There is no man who knows more about the injustices and iniquities of the National Insurance Act than Dr. Bateman. Therefore let us all take his advice, refusing to sign any legal agreements and contracts of the true meaning and obligations of which we are ignorant. I suggest that before any new agreement be signed it be submitted to the Medical Defence Union for report upon any new terms or obligations sought to be imposed upon us, and that this report be discussed by every Division; by so doing a satisfactory decision could be arrived at.

2. Many medical men think that with a larger number of doctors in the House of Commons our interests would be safeguarded. We must be very careful whom we choose, or exactly the opposite result may be obtained. Mr. Smith Whitaker owes his present position entirely to the medical profession. When he joined the "red tape hierarchy" we were told that it would be an advantage to the profession, which he would deal with sympathetically. I have carefully sought for signs of sympathy, but I have found none, and in his comments on Dr. Fisher's case he assumes the rôle of a pedagogue which certainly does not add dignity to his exalted position. The type of medical man to choose is the non-political doctor who has no axe to grind, and one thoroughly conversant with all types of practice, whose main object will be to safeguard the independence of both the patient and medical practitioner.—I am, etc.,

Bedford, July 7th. S. J. ROSS.

SIR,—I venture to suggest that the strictly legitimate reply to this last monstrous imposition upon dispensing panel doctors is to give notice to their Insurance Committees that, if they do not repudiate the absurd contention of the Commission, the doctor will cease altogether to dispense. It will then become the duty of the Insurance Committees to provide chemists for nearly every large village, and of the chemists to supply every costly remedy out of the drug fund.—I am, etc.,

Chichester, July 21st. G. C. GARRATT.

A NOTE ON EPIDEMICS.

SIR,—It seems to me that the epidemic disease described by Dr. Burnford differs in some important respects from glandular fever. The few cases I have seen corresponded exactly with the description given by Dawson Williams (*Encyclopaedia Medica*, first edition, vol. iv, p. 156). The more important points of difference are briefly as follows: In glandular fever the first symptom is generally pain and stiffness of the neck, and in many cases there is pain in the abdomen. After two or three days an oval swelling (glandular) appears under the edge of the sterno-mastoid muscle, almost invariably on the left side, followed in a day or two by a similar swelling on the right side and a generalized adenitis. The symptoms generally last about a fortnight. In all my cases abdominal pain was marked, and in the first case caused some anxiety till the typical swelling appeared. The symptoms, of course, may be modified in adults.—I am, etc.,

Thornhill, July 21st. M. BRYSON, M.B.

Medico-Legal.

THE COVENTRY CASE.

Pratt and Others v. the British Medical Association and Others.

IN the King's Bench Division on July 15th, before Mr. Justice McCardie, the hearing was begun of an action by Dr. Ernest Camden Pratt, Dr. David Holmes, Dr. Andrew St. Lawrance-Burke, and Dr. Charles Hodge Cairns, registered practitioners of Coventry, against the British Medical Association, and Drs. William H. Lowman, William J. Pickup, John Orton, and Thomas Webb Fowler, registered medical practitioners of Coventry, and members of the Coventry Division of the British Medical Association. The plaintiffs claimed damages for alleged conspiracy to injure them in their profession, and to libel and slander them, and for alleged libels and slanders. The allegations were denied. For the preliminary particulars here briefly given we are indebted to the *Times* Law Reports.

Mr. Schwabe, K.C., and Sir Hugh Fraser appeared for the plaintiffs; Mr. McCall, K.C., Mr. Hollis Walker, K.C., and Mr. A. Neilson, instructed by Messrs. Hempson, solicitors, appeared for the defendants. Counsel stated, in opening the case, that since the proceedings had been begun Dr. Cairns, one of the plaintiffs, had died. The libels alleged charged the plaintiffs with conduct detrimental to the honour and interests of the profession in carrying on a dispensary in Coventry. It was alleged that the dispensary was conducted on principles fundamentally opposed to those approved of by the Coventry Division of the British Medical Association in the following respects: (1) The absence of a maximum wage limit upon the patients treated; (2) the administration was under lay control; (3) the members accepted unnecessarily low rates of subscription; (4) a dispensary conducted under these conditions stood in the way of any betterment of local contract practice conditions. The defendants pleaded that the occasion was privileged.

The first two days of the hearing were given up to the opening address for the plaintiffs by Mr. Schwabe, which was concluded on July 17th, when Dr. St. Lawrance-Burke gave evidence and was cross-examined by Mr. McCall. On July 18th the evidence of Dr. Holmes and Dr. Pratt was taken, and several lay witnesses from Coventry were heard. On July 19th Mr. Farren, for many years honorary secretary and collector to the dispensary committee at Coventry, and Mr. Gray, for more than forty years a member of the committee, gave evidence.

The hearing was resumed on July 22nd, when Mr. McCall, in his opening address for the defence, submitted that (1) there was no illegal conspiracy, (2) there was no defamation, either in the way of libel or slander, and (3) if there were, all the publications, including the BRITISH MEDICAL JOURNAL, were privileged. Moreover, no express malice had been shown; and, finally, the suggested agency of each defendant for the others was unfounded. The charge against the British Medical Association failed, as it was against a corporation.

In the course of the legal argument, Mr. Justice McCardie said that the real question was as to the permissible limits of quasi-coercive action. It was, he said, a matter that touched all professions and trades. Later he asked how the case differ from that where a labour leader says to an employer, "If you continue to employ that man, I will call out the union men." To this Mr. McCall replied: There is a great distinction between a trade-union leader, who has wide powers over the members of the trade union, when he says to an employer that he will use the power of the trade union to call out the men, whether they wish it or not, and a number of medical men who say to another medical man, "If you continue to be associated with this institution, which we object to, we shall refuse to meet you; this is a question of loyalty to professional interest and honour, and we invite all our members to agree with us in this policy." There was nothing illegal in that.

Dr. Alfred Cox, Medical Secretary of the British Medical Association, gave evidence on July 22nd and 23rd, describing the machinery of the Association and the circumstances that led to the action, and evidence was also given by Dr. James Neal, Deputy Medical Secretary.

The hearing of the action had not been concluded at the time of our going to press.

Universities and Colleges.

UNIVERSITY OF LONDON.

THE following candidates have been approved at the examination indicated:

M.D.—*Branch I, Medicine:* A. J. Eagleton, I. H. Pearse, W. E. Pickles, G. F. Rodrigues. *Branch VI, Tropical Medicine:* R. I. Stones.

LONDON HOSPITAL MEDICAL COLLEGE.

The following awards have been made: Medical Prize, S. N. Sennett; Honorary Certificates, E. Miller, A. B. K. Watkins. Obstetric Prize, £20, J. C. Ryder Richardson. Honorary Certificate, J. Fanning. Andrew Clark Prize in Clinical Medicine and Pathology, £26, A. B. K. Watkins. Honorary Certificates, S. N. Sennett, E. Miller. Sutton Prize, £20, A. B. K. Watkins. Anderson Prizes in Elementary Clinical Medicine, £3, M. C. Hartley, R. A. Madgwick; Honorary Certificates, A. R. Crane, J. J. Coghlan. Prizes in Elementary Clinical Surgery, £5, E. L. Sergeant, M. Marcus, M. C. Hartley, and F. F. Langridge and C. W. Tomkinson equal (prize divided). Letheby Prize in Organic Chemistry, £10, S. Sandler.

UNIVERSITY OF GLASGOW.

THE following degrees were conferred on July 20th:

M.B., CH.B.—*J. G. Harrower, *W. R. D. Hamilton, †M. Hyman, †Margharita M. L. Couper, C. O. Anderson, Ellen D. Anderson, J. D. Arthur, W. Barras, D. C. Bowie, W. G. Burns, M. J. Cahalane, H. A. Cochrane, E. M. E. Cumming, J. F. Cunningham, A. M. Davidson, A. B. S. Drysdale, W. Edgar, D. Finlayson, Grace A. Fleming, G. Gordon, A. S. Goudie, Jane E. Hasson, Lillias B. Hardie, A. Henderson, J. Irving, R. P. Jack, J. C. Laurie, J. Lipsey, A. J. Macartney, D. MacColl, Isabella M'Fadzean, T. M'Gowan, J. W. Mackay, A. A. M'Laughlan, D. Maclean, W. R. M'Linden, F. K. Macmillan, J. M. Melvin, Florence F. M. Milne, W. Napier, B. F. Niblock, Elizabeth P. Y. Paterson, N. B. Peacock, R. J. Peters, J. B. Potter, Rahmat Ullah Qureshi, W. Scotland, Katherine Scott, Margaret M. C. Steedman, J. A. Walls, T. M'S. Wilson, G. M. Wishart.

* With honours. † With commendation.

The principal, Sir Donald MacAlister, who performed the capping ceremony, conveyed the congratulations of the Senate to the recipients of the degrees, and to the large majority of the men who had offered themselves for the service of the country in its need he wished God-speed and all honour.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THE following candidates having passed the requisite examinations have been admitted Fellows:

C. H. B. Avarne, F. B. Craig, W. R. Higgins, E. W. Kirk, D. Lees, L. N. Morris, F. L. Spalding, K. V. Trubshaw, A. S. Wilson.

Obituary.

THE sudden death of Dr. JOHN JAMES COWAN, while on holiday at Tenby, on July 1st, has deprived Malvern of a well-known and greatly respected practitioner. He was the son of the late Inspector-General Michael W. Cowan, M.D. After graduating M.B., C.M. in 1890 at Edinburgh he spent five years as assistant medical officer to the Roxburgh District Asylum, Melrose. During the twenty-four years he practised in Malvern and the adjacent country, and for the last ten years was honorary surgeon to the Malvern General Hospital. In 1915 he founded the Malvern Royal Naval Convalescent Hospital for the sick and wounded of all Admiralty ratings. Dr. Cowan's skill as a surgeon, sound judgement, steadfast character, and cheery disposition will long be remembered by many in the district.

SURGEON-MAJOR WILLIAM JASPER RENDELL, R.A.M.C. (retired), died at Wadebridge, Cornwall, on May 30th. He was born at Wadebridge, where his father practised for over forty years, on December 20th, 1831, took the M.R.C.S. and L.S.A. in 1853, and entered the army as staff assistant-surgeon on May 26th, 1854. He became staff surgeon on February 6th, 1866, and surgeon-major on March 1st, 1873, retiring on June 1st, 1874. He served in the 55th Foot from 1855 to 1866, in the 91st Foot in 1867-68, and in the 13th Foot (the Somerset Light Infantry), from 1868 to 1874. He served in the Crimea campaign in 1855, and was present at the siege and capture of Sebastopol (medal with clasp, and Turkish medal); in the Indian Mutiny in 1857-59, including the action at Sikandra (medal); and in the Bhutan campaign on the north-east frontier of India in 1865 (medal with clasp). He leaves a widow and one son.

DR. ROBERT TRIMBLE of Burgh-by-Sands, Carlisle, who died on June 11th, was a son of the late Dr. Trimble of Castle Bellingham, co. Louth. He took the diploma of L.R.C.S.I. in 1864, and the fellowship in 1874, and graduated M.D.Glasg. in 1865. After practising in Ireland in succession to his father, he removed to Preston, where he dwelt for twenty-seven years, subsequently moving to Burgh-by-Sands, where he held the post of district medical officer and public vaccinator. He was consulting surgeon to the Preston and County of Lancaster Royal Infirmary; and a member of the English Division of the Border Counties Branch of the British Medical Association.

ALEXANDER HARBINSON, M.D., R.U.I., M.R.C.S.Eng., and L.M. 1871, died on July 2nd at Millbank, Elgin. For twenty-three years he had been senior assistant medical officer of the Lancaster County Asylum. During that period his devotion to work and self-sacrifice won for him the confidence and esteem of all with whom he was associated, and general regret was expressed at his departure for Scotland in 1897. In his retirement he still interested himself in medical affairs, being a student to the last, and a keen supporter of the British Medical Association. He was J.P. for the County of Elgin and member of the Spynie School Board, and took a great interest in all public affairs.

PERTHSHIRE has lost its oldest medical practitioner by the death of Dr. ROBERT ROBERTSON of Errol in his eighty-seventh year. After completing his studies in Glasgow he started practice in his native village of Errol, and served that community faithfully and well for over fifty years. The occasion of his jubilee was marked by a handsome presentation from his many friends in the district. He was long a member of the British Medical Association and of the Perthshire Medical Society (now the Perthshire Branch) and of the Forfarshire Medical Society. Dr. Robertson took an active interest in all local affairs, and was well known as an antiquarian and a successful horticulturist. He was also a J.P.

DR. JOHN CUNNINGHAM of Sunderland died on July 10th, aged 69. He was a native of Dumfries and received his medical education at Anderson College, Glasgow, taking the diplomas of L.R.C.P., L.R.C.S.Edin. in 1874, and the M.D.Brux. degree with distinction in the following year. After practising in his native county for eleven years he removed to Sunderland, where he continued to practise until his death. He was a member of the Sunderland Division of the British Medical Association. He leaves a widow and two sons, one of whom is a member of the medical profession and is at present with the R.A.M.C. in Egypt.

DR. RICHARD WEIL of New York, who died recently, had been since 1906 an active member of the staff of the Huntington Fund for Cancer Research. He was one of the founders of the American Association for Cancer Research, and took a leading part in the foundation of the *Journal of Cancer Research*, of which he was editor-in-chief. On the reorganization of the New York Memorial Hospital he became assistant director of cancer research and attending physician. In 1915 he resigned those offices on his appointment to the chair of experimental medicine at Cornell, but he continued his work on cancer.

Medical News.

DR. A. J. RICE-OXLEY has been appointed a justice of the peace for the County of London.

DR. S. E. BAXTER of Wollaston, honorary secretary and treasurer of the Northamptonshire Division of the British Medical Association, has been elected a member of the Northamptonshire County Council.

DR. T. BRAILSFORD ROBERTSON, formerly Professor of Biochemistry and Pharmacology in the University of California, has been appointed Professor of Biochemistry, and Dr. J. J. R. Macleod, formerly Professor of Biochemistry and Physiology in the Western Reserve University, Professor of Physiology in the University of Toronto.

THE Italian journal, *Tuberculosi*, which has for some time been in a state of suspended animation, is about to come to life again. It used to be published at Milan under the editorship of Professor Ronzoni; it will henceforth appear in Rome under the direction of Professors Ronzoni and Sforza. It will be the authorized mouthpiece of the Italian antituberculosis organizations.

THE House and Library of the Royal Society of Medicine will be closed for cleaning from Thursday, August 1st, to Saturday, August 31st, inclusive. During that time, however, medical officers of the Naval, Military, and Air Services (including the Medical Corps of the Dominions and our Allies) will be admitted to the Library between 10.30 a.m. and 6.30 p.m.

AT its meeting on July 23rd the London Panel Committee decided to invite London panel practitioners to send a new motor ambulance for expeditionary service to the British Red Cross Society to replace one subscribed for earlier in the war, but now worn out. The cost of an ambulance is now approximately £450, and to maintain the car on the road for twelve months a sum of £200 is required.

THE series of congresses to be held at Monaco to promote the expansion of the thermal, mineral, and climatic stations and baths of the allied and friendly nations will deal with hydrology, hygiene, alpinism, thalassotherapy, and watering places. In connexion with the congresses there will be an exhibition. The whole is under the patronage of H.R.H. the Prince of Monaco. Professor Maragliano, Senator of Italy, has been elected general president.

NO. 8 of the *Athenaeum Subject Index to Periodicals*, 1916 (Bream's Buildings, Chancery Lane), is devoted to education and child welfare. It consists of twenty pages. In addition to the subject index there is a list of authors, with entries following their names showing the headings under which their papers are registered. The *Index* is indispensable to serious workers, and the method of publication in groups of subjects allows each one to choose exactly what he requires.

THE annual meeting of the Poor Law Medical Officers' Association was held at 34, Copthall Avenue, E.C.2, on June 27th, with Dr. A. A. Napper in the chair, the president, Surgeon-General Evatt, being unavoidably absent. The report of council was submitted by the honorary secretary, Dr. A. Withers Green, who afterwards opened a discussion on the future of the Poor Law in connexion with the proposals of the Local Government Committee on Reconstruction, in which Drs. Claude Taylor, Thackray Parsons, and Denning took part. We are asked to say that a full report of the meeting will appear in the *Medical Officer*.

THE American Zionist medical unit has been organized because it is recognized that existing conditions make medical relief even more necessary now in Palestine than in normal times. The Turkish military authorities have closed hospitals, removed some of the best doctors and taken away appliances. War brought famine, and famine led to an epidemic of typhus. A sum of £50,000 has been provided from the Palestine Restoration Fund for the equipment of a medical unit. It consists of forty-four persons (doctors, dentists, nurses, pharmacists and mechanics), but it is hoped to add to this staff later. The unit is taking to Palestine a full equipment for a hospital of 100 beds and ambulances, and a quantity of clothing. The present intention is to set up a central hospital of 100 beds in Jerusalem, taking over for the purpose the building originally owned by a German society, but now known by the Hebrew title of L'maan Zion. Travelling hospitals, to be supplied from permanent dispensaries in the cities, will visit the country districts. The unit will give relief to Arab, Jew or Armenian, irrespective of race or sect. Though it is only a small

enterprise in comparison with the Red Cross work carried on in every belligerent country, it has a special interest as the beginning of a new effort to alter the health conditions of Palestine and educate the population in hygiene.

BRODIN and SAINT-GIRONS state that the number of leucocytes diminishes immediately after a meal, but then rises, presenting two maxima—the one two or three hours and the other four or six hours afterwards. The number of polynuclear cells follows a nearly parallel course.

OWING to the growth among boys of the habit of smoking to excess the police authorities in Berlin, on October 13th, 1917, forbade smoking by youths under 16. A boy under that age may now neither buy nor smoke tobacco in public, and those in authority over him are to be held responsible for enforcing this regulation, breaches of which are to be punished by fines up to 60 marks or imprisonment.

WE referred in our issues of November 24th and December 15th, 1917, pp. 709 and 816, to the proceedings taken by the police against Mr. Edward Yeates, F.R.C.S.I., on the charge of wearing military uniform without lawful authority. The defendant refused to give an undertaking not to continue to wear the uniform of medical officer of the New Zealand Expeditionary Force, holding that having engaged for the whole period of the war he was entitled to wear it; he denied the validity of the notice in the *New Zealand Gazette* stating that his appointment had been cancelled at his own request. The magistrate inflicted a fine of 25 guineas and 10 guineas costs. An appeal against the conviction was heard at the London Sessions on July 17th. The Chairman upheld the decision of the court below, but, in view of the appellant's undertaking not to wear the uniform in future, reduced the fine to 1s. The decision of the courts here, on the evidence admitted before them, appears to have rested on the notice in the *New Zealand Gazette*, the validity of which they felt bound to accept. The Chairman at the appeal stated that there was no reflection on the appellant's honour. This will be a satisfaction to Dr. Yeates, who was arrested in a most unceremonious manner, and treated in a way which could not fail to convey the impression that the authorities considered he had acted dishonourably in continuing to wear uniform. While all reflections upon his character as an officer and a gentleman are thus removed, we still think that Dr. Yeates has had less than justice. General G. S. Richardson, commanding the New Zealand Forces in the United Kingdom, stated at the hearing of the case in November that the matter arose out of a dispute with the New Zealand Defence Department. We are informed that Dr. Yeates served as a medical officer in the New Zealand Expeditionary Force, and we understand that this has been confirmed by the Premier of New Zealand. This is sufficient to prove that Dr. Yeates has good grounds for his contention.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

The address of the Central Medical War Committee for England and Wales is 429, Strand, London, W.C.2; that of the Reference Committee of the Royal Colleges in London is the Examination Hall, 8, Queen Square, Bloomsbury, W.C.1; and that of the Scottish Medical Service Emergency Committee is Royal College of Physicians, Edinburgh.

LETTERS NOTES, ETC.

EPSOM COLLEGE.

A LIFE GOVERNOR writes: Each year the Council of Epsom College appeals in your columns for further funds, and shows that what they have leaves a large amount of need unhelped, even in normal times. The war must have increased this need enormously. A committee is now appealing for "some thousands" for a war memorial, but it does not propose to use it to help the war widows and orphans, but to rebuild the nave of the chapel, "to the honour and glory of God." May one call to the remembrance of the committee the words of one who said "Inasmuch as ye have done it unto the least of these, ye have done it unto Me"?

TYPHUS AND VERMIN IN THE EIGHTEENTH CENTURY.

DR. ALEX. KING (Castries, St. Lucia, B.W.I.) writes: In connexion with recent investigations as to the conveyance of typhus fever and the part played therein by parasites, the following quotation may be of interest. It is taken from the recollections of Grace Dalrymple Elliott, a lady who had somewhat varied and exciting career in the end of the eighteenth century. She was, among other things, a mistress of George IV while he was still Prince of Wales, and a great friend of "Egalité" Orleans. She went through most of the Terror in or near Paris, and, on account of her well-known Royalist sympathies, made the acquaintance of the inside of several revolutionary prisons.

"Three weeks after this I was once more removed to this prison, to my great grief and consternation, and taken at nine o'clock at night, just as I was going to bed, to the Queen's stables, where many of the poor people of Nantes had just arrived on their way to Paris to be tried. They were in most miserable plight, having marched on foot from Nantes, many of them very ill, some dying on the road, it is supposed of the gaol distemper. This, however, I doubt, as I slept on the same straw with them all night in the stables, and though they were full of vermin I got nothing dirty from them. To what I impute to a sweet-scented sachet I always carried in my corset . . ."

Note the calm assumption of cause and effect—"vermin" and "gaol distemper"—stated as if it were a matter of common knowledge, which no one would cavil at. We have all heard of "gaol fever" and "ship fever"; many of us have known typhus fever in over-populated tenement houses in large towns in, for instance, the West of Scotland, and have always associated the condition with squalor, dirt, and overcrowding; but I do not recollect having, until very lately, heard the connecting link of "vermin" so positively mentioned. Yet this passage was written in the seventies of the nineties, about 120 years ago.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

OVER THIRTY YEARS A MEMBER writes: It is evident that widespread dissatisfaction exists among members of the Medical Sickness Society regarding the recent action of the committee, and the suggestion in the letter from "Another Old Member" in the issue of July 13th, p. 48, of a postal vote deserves support. What is now required is that some member, preferably not serving in the R.A.M.C., should come forward and offer to receive communications, etc., and so bring about concerted action.

YET ANOTHER OLD MEMBER writes: I also wish to protest against the discontinuance of the bonus to members reaching the age of 65. It seemed to me that a distinct promise was made that such a bonus should be paid in the place of other benefits we sacrificed for it.

THE PREVENTION OF VENEREAL DISEASES.

DR. OTTO MAY writes: In my recently published book on the *Prevention of Venereal Diseases*, the City Corporation Clinic in conjunction with St. Bartholomew's Hospital was, by a regrettable oversight, omitted from the list of treatment centres established under the Local Government Board scheme. The centre in question was among the earliest to be opened.

TUBAL TWIN PREGNANCY.

MAJOR GORDON TAYLOR, R.A.M.C., writes: I have read with interest Mr. McCann's kindly comment upon my paper on tubal twin pregnancy (BRITISH MEDICAL JOURNAL, July 6th, p. 10). My memory fails me on the question of the insertion of the umbilical cords in that case. I trust that the specimen from whom the specimen in the Museum of the College of Surgeons was removed made a better recovery in his accoucheur's hands than did the luckless Frenchwoman in mine.

DIPHTHERIAL INFECTION OF WOUNDS.

WE gave on June 15th an abstract of the report of a committee of the Canadian Army Medical Corps on the occurrence of diphtherial and diphtheroid infection in wounds. A correspondent in this country informs us that he recently had to treat several cases of diphtheria among the nursing staff of a hospital. After ordinary causes had been excluded he found three soldiers with wounds infected with Klebs-Loeffler bacilli. The men were admitted from France.

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